

**THE EFFECT OF COMMUNITY PARTICIPATION ON THE PERFORMANCE
OF NAMELOK WATER PROJECT IN KAJIADO COUNTY, KENYA**

TAPATAYIA N. CAROLYNE

C50/77309/2015

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR AWARD OF MASTERS OF ARTS DEGREE IN
SOCIOLOGY (RURAL SOCIOLOGY AND COMMUNITY DEVELOPMENT)
IN THE UNIVERSITY OF NAIROBI**

2019

DECLARATION

Student

This research project is my original work and has not been presented to any other examination body. No part of this research should be reproduced without my consent or that of the University or Institution.

Signature: ----- **Date:**-----

Tapatayia N. Carolyne

C50/77309/2015

Supervisor

This research project has been submitted for examination with my approval as the appointed University Supervisor.

Signature: ----- **Date:**-----

Prof. Preston Chitere

DEDICATION

This research project is dedicated to my family for continuous supporting my education and encouraging me always during this period.

ACKNOWLEDGEMENTS

This research project was a result of support from several sources; first I would like to acknowledge my supervisor Prof. Chitere for continuous encouragement, patience and keen guidance through the project and continued interest in my study. Also much appreciation to the Namelok Water Project management and the community at large for the information that they gave and made this research work successful. Lastly to the staff and management of the University for the Conducive learning environment during my study period.

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ABBREVIATIONS AND ACRONYMS

CCB	Community Capacity Building
DRR	Disaster Risk Reduction
GIZ	German International Cooperation
IWM	Integrated Water Management
NGOs	Non-Governmental Organizations
SADC	South Africa Development Community
UN	United Nations
UNDP	United Nation Development Programme
UNDRR	United Nations for Disaster Rick Reduction
WRMA	Water Resource Management Authority
WRUA	Water Resource Users Association

ABSTRACT

Community participation in water projects is key to the development of the project and its sustainability. To achieve the participation all the local members of a community have to be involved in giving out their opinions, advice on how the projects can be managed and maintained as well as resources such as money and materials. This research was to find out effects of community participation on the performance of water resources with reference to Namelok Water Project in Kajiado County. The concerns of the study were: community leadership, communal capacity building and members perceptions. In the literature review community leadership and water resource management, capacity building and water resource management, household's perceptions, theoretical framework (community organization model and social capital theory) and finally conceptual framework and operational definitions. The study used qualitative and quantitative research design with a target population of 150 beneficiaries from the community and the Management of the Namelok Water Project. Data was collected through questionnaire while the analysis was done through quantitative and qualitative methods. The findings from the study indicated that community participation was key for the performance of water resource; also community leadership should be encouraged by involving all the members of the community to avoid disagreements on how the beneficiaries can obtain the water and be connected to their households. Financial support should be increased through donor supported programs and ensure that this finances are used appropriately so that it encourages the investors to continue supporting the project. The negative perception of the households can be reduced by offering better services through management of the pipes and connecting the water taps to their households for family consumptions. The study recommends that there is need for management to influence the stakeholders to participate in the projects that have been sponsored for them to see the outcomes of their investments. Therefore all the stakeholders should be involved especially on capacity building through regular training and seminars on water management to all the beneficiaries. Also the level of community participation in project planning and implementation should be increased to enhance the sustainability of the water projects in the county. Finally, there is need for capacity building to be done through training of the stakeholders and the community members to improve on their capacity on management of the project.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Water is a precious natural resource, vital for life, development and the environment. It can be a matter of life and death, depending on how it occurs and how it is managed. When it is too much or too little, it can bring destruction, misery or death. Irrespective of how it occurs, if properly managed, it can be an instrument for economic survival and growth. It can be an instrument for poverty alleviation lifting people out of the degradation of having to live without access to safe water and sanitation, while at the same time bringing prosperity to all; UN-Water/Africa, (2004). However, when it is inadequate in either quantity or quality, it can be a limiting factor in poverty alleviation and economic recovery, resulting in poor health and low productivity, food insecurity and constrained economic development.

In the last decade, the provision of potable water for domestic and rural livelihood needs has moved to center stage on the international development agenda and in the interventions of many non-governmental organizations and national governments. The General Assembly of the United Nations (2003) drew critical attention to the importance of water to sustainable development and poverty alleviation by declaring 2003 the International Year for Freshwater. In that same year, the Millennium Development Goals targeted to reduce by half the proportion of people without access to safe drinking water and sanitation.

Of the water resources on Earth only three percent of it is fresh and two-thirds of the freshwater is locked up in ice caps and glaciers. Of the remaining one percent, a fifth is in remote, inaccessible areas and much seasonal rainfall in monsoonal deluges and floods cannot easily be used. As time advances, water is becoming scarcer and having access to clean, safe, drinking water is limited among countries; Fry, (2008). At present only about 0.08 percent of all the world's fresh water is exploited by mankind in ever increasing demand for sanitation, drinking, manufacturing, leisure and agriculture. Due to the small

Percent of water remaining, optimizing the fresh water we have left from natural resources has been a continuous difficulty in several locations worldwide; Walmsly and Pearce, (2010).

Water resource management is the activity of planning, developing, distributing and managing its optimum use. It is a sub-set of water cycle management. Ideally, water resource management planning has regard to all the competing demands for water and seeks to allocate water on an equitable basis to satisfy all uses and demands; Walmsly and Pearce, (2010). As with other resource management, this is rarely possible in practice. Much effort in water resource management is directed at optimizing the use of water and in minimizing the environmental impact of water use on the natural environment. The observation of water as an integral part of the ecosystem is based on integrated water resource management, where the quantity and quality of the ecosystem help to determine the nature of the natural resources; Fry, (2008).

Successful management of any resources requires accurate knowledge of the resource available, the uses to which it may be put, the competing demands for the resource, measures to and processes to evaluate the significance and worth of competing demands and mechanisms to translate policy decisions into actions on the ground; World Bank Report, (2006). For water as a resource this is particularly difficult since sources of water can cross many national boundaries and the uses of water include many that are difficult to assign financial value to and may also be difficult to manage in conventional terms. Examples include rare species or ecosystems or the very long term value of ancient ground water reserves; Howard, (2003).

Community participation and management in water resource is acknowledged as central to the provision of essential services like clean water facilities to underserved communities in developing countries. The role of active community participation in ensuring sustainable water development is obviously recognized as the most important factor and agent of development in any given country; Gebremedhin, (2004). The process denotes the involvement of the communities in taking care of the water source such as

decision making and undertaking some activities which would not destroy water source. The greater the control of resources is given to outsiders the less local communities can be involved at critical decision making stages (Agrawal, 2001). However, participation can stimulate an on-going learning process by increasing awareness of collective responsibility within the community.

Eshum (2008) contends that community involvement in IWRM or in other environmental issues is based on three basic reasons. These are emergence of participatory approaches which demonstrate the importance of local communities' consent in taking part in public decision-making processes, especially on issues that directly affect their welfare. In this context, the local community participation could provide an important database, experience and ideas that could lead to practical, relevant, achievable and acceptable solutions to water related problems. Another one is the need to use Indigenous Knowledge (IK) as well as opinion in environmental protection, including proper water resource use and management. Also the need to build public trust; lack of public trust might lead to protest and antagonism between water resource users and other stakeholders due to varying interests and demands.

At the global level climate change and the hydrological variability of water's distribution and occurrence are natural driving forces that, when combined with the pressures from economic growth and major population change, make the sustainable development of our water resources a challenge. The combination of these factors commonly results in increased water use, competition and pollution in addition to highly inefficient water supply practices. Loomis, (2000). At the same time most countries in Africa have large regions that suffer acute water shortages, either periodically or on a permanent basis. Consequently, in most of the continents, effective water-resource management is of critical importance.

Although research in the 1990s has demonstrated that African women are active participants in economic development, there has been relatively little systematic factoring of gender considerations into resource-allocation decisions. Despite substantial evidence

of the economic profitability of this approach, traditional assumptions about the domestic roles of women continue to guide policymakers; Jamie and Serdar, (2010). According to Agrawal and Angelsen (2009) local communities in various areas of Tanzania have developed coping strategies to ensure conservation of water resources. However, some of the traditional strategies have been eroded by modernization factors and population pressure to the extent of affecting water quantity and quality.

Human activities that are conducted near water resources affect the water resources management, river ecology and the quality of water through pollution and silt sedimentation. In Kenya, there has been an increase of problems over time that subject water resources to a number of crisis and pressures. Poor water resources management have stimulated and sustained a number of problems related to health, socioeconomic and environment, which need to be solved Sayer and Campbell, (2004). These problems are accelerated and magnified by the countries, communities and individuals initiatives for economic and social development as many development activities are affected by water availability.

1.1.1 The Namelok Water Project

The Namelok Water Project was started with an aim of seriously addressing the issues pertaining to safe drinking water shortage in the Namelok village area of Loitoktok Sub County, Kajiado County. There is the Namelok water pipeline from Mt Kilimanjaro to Kajiado town which passes in the area in the fore ground. The pipeline is rarely having water. The local community used to get their water supply from a water pan which however dries up during dry periods. Therefore there was a serious need for the local community to have reliable, clean and adequate water supply within the village. The Namelok Water Project drilled a borehole to meet their domestic and institutional water requirements. The main objective of the project was for the local community to have are liable, clean and adequate water supply within the village.

1.2 Statement of the Research Problem

Kajiado is a semi-arid area with long rains from March to May. Livestock stock keeping is the main stay of the local economy. Piped water project that passes through the area from Kilimanjaro did not provide water to the inhabitants. The community suffered persistent water shortage from both human, livestock and crop farming. In addition to this multiplicity of organizations, effective water resources management has been constrained by limitations in the technical, financial capacities in these organizations and unmanaged human activities surrounding water source Sayer and Campbell, (2004).

There has been the tendency of cutting trees around the Namelok village on the side of Loitoktok Sub County whose impact has been attributed to the shortage of water. Although many studies present the importance of local community participation in water resource management (IWMI, 2009, Bruns, 2008, Day, 2009, Victor, 2011 and many more), the methods of participation are still under acknowledged by most scholars across the globe including Kenya and Kajiado in particular. It remains unclear on the ways on how the communities participate in water resources management particularly in the Namelok Water Project. This study therefore focused on community participation in water resource management, in order to reveal the ways in which community participation was being implemented in the project.

1.3 Research Questions

This paper sought to address the following research questions:

- i. What is the influence of characteristics of the respondents on performance of Namelok Water Project in Kajiado County?
- ii. What is the influence of community participation on the performance of Namelok Water Project in Kajiado County?
- iii. To what extent does communal capacity building influence the performance of Namelok Water Project in Kajiado County?
- iv. To what extent does household's perceptions affect performance of Namelok Water Project in Kajiado County?

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of the study was to investigate the effects of community participation on the performance of Namelok Water Project in Kajiado County.

1.4.2 Specific objectives

Specifically, the objectives of this study were:

- i. To examine the influence of characteristics of the respondents on performance in Namelok Water Project in Kajiado County.
- ii. To examine the influence of community participation on the performance in Namelok Water Project in Kajiado County.
- iii. To determine the extent to which capacity building influences performance in Namelok Water Project in Kajiado County.
- iv. To examine the extent to which households' perceptions affect the effect of performance of Namelok Water Project in Kajiado County.

1.5 Significance of the study

The study benefited the following;

- The management of Namelok Water Project will be able to understand the level of community participation on the performance of the project and highlight on the areas that need more emphasis on communal participation.
- Immediate communities and Policy Makers will benefit from knowledge gathered on the importance of community participation in water resources management. The knowledge acquired through this study will be useful can be functional in reviewing the Kenyan water policy.
- Traditional institutions of various forms which in many rural areas in Africa in the past played a central role in sustainable natural resource management. Adams and Anderson, (1988). Too often, the formulation of government policies, laws and legislations in natural resource management inadequately recognizes and

integrates existing indigenous structures and institutions in natural resource management.

- This study will contribute to development strategies and policy decisions in involving traditional institutions in the formulation of strategies and policies for sustainable natural resource management. It is also intended to identify and recommend appropriate areas of collaboration among the traditional and formal institutions in natural resource management.
- To academic community the research will benefit by adding new knowledge on water resource management and community participation. The outcome of the study is also expected to contribute to theory building in the area of natural resource management.

1.6 Scope of the study

The study focused on the effects of community participation on the performance of Namelok Water Project in Kajiado County. Specifically, it focused on characteristics of the respondents, community participation, capacity building, and households' perceptions and how they affect performance of Namelok Water Project in Kajiado County. The target population was the beneficiaries of the project who included community members/leaders and the employees of the project.

1.7. Limitations of the study

- Time was a limitation in that the researcher was not in a position to adequately address all issues in relation to the study and thus worked within the allocated time. The research period may be considerably short but this was solved by allocation of more time for data collection.
- The respondents may have not fully answered the questions in the questionnaire satisfactorily due their level of literacy and this may have affected the analysis of data. To avoid this researcher explained the importance of the research to the respondent.

- Lack of adequate resources in terms of money to carry out the study satisfactorily. The researcher addressed this limitation by carrying out the research with the available finance.
- Although, women are most users of water in the homesteads they are not given equal opportunity compared to men in the case of leadership, membership, participation and decision making of the project. In this region women are marginalized.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

In this chapter, literature and theoretical literature related to this study has been presented. The literature has been reviewed on, the influence of characteristics of the respondents on performance of water resources projects, community leadership on water resource management, and capacity building influence on water resource management. The theories of community participation, social capital theories have been reviewed. The chapter winds up with a conceptual framework.

2.2 Community Participation on Water Resource

Community leadership is the courage, creativity and capacity to inspire participation, development and sustainability for strong communities. The various qualities of community leaders can be summarized in three over-arching categories: desire, competency and intangibles Bruns, (2008).

In terms of desire, leaders can be built, but in many ways some of the prerequisites to being a great leader are things that cannot simply be learned. A great leader has an innate desire to lead; in fact, a great leader is someone that is going to blaze trails in almost any situation, as if they don't even have a choice in the matter. A great community leader not only have the motivation to affect positive change in the community, but they also want to be at the forefront of that transformation. They inherently possess the dedication and drive that is a paramount necessity in being an effective leader and they are willing to put in the time and effort towards service, selflessly providing their time and effort for the greater good Bruns, (2008).

Finally, a great leader is not only able to evolve and grow throughout the course of their leadership tenure, they have a fierce eagerness to learn and adapt. It's not enough to just be willing to pay lip service to other people's thoughts and ideas; an effective leader

needs to be open-minded enough to listen, learn and change course when new perspectives on a given situation are obtained;Carter, (2007).

In relations to competency a potential leader can have all the desire and motivation to bolster the greater good, but without some core competencies their ability to get other people to follow their lead will fail. Leadership is above all about influence, and it is difficult to persuade and enthuse a community if you don't possess the requisite intelligence that inspires confidence from others. This is more than just being "*book smart*" but also possessing the emotional intelligence it takes to work effectively with others. It's those interpersonal skills that are just as important as native intelligence. Being able to negotiate and mediate effectively is crucial to anyone that hopes to win "buy-in" from their community (Carter, 2007).

In terms of Intangibles, there are some factors that are difficult to measure, but still of the utmost necessity for effective community leaders. These qualities tie the aforementioned characteristics together, and enable people with desire and ability to truly emerge as a leader. Chief among these are the ability to be self-aware, to be able to take a critical look at oneself and know when to ask for help to fill a gap that may exist in one's repertoire. The other side of that same coin is the ability to put oneself in the shoes of other people (Carter, 2007).

The quality of empathy is important for leaders because they must be able to sense how they are being perceived at any given moment and be able to adjust their approach if they are not being recognized in the most effective manner. Finally, an effective community leader needs to be a dreamer, a big picture person who is able to see beyond the fog of day-to-day activities. This forward-thinking characteristic and ability is especially crucial when trying to affect lasting social change, which is often a gradual and laborious process in which the ultimate objective might not even be achieved in this generation (Bruns, 2008).

Community leadership in water resource management is an innovative approach to rural water supply and resource management. Since 2006, *the SADC Regional Water Sector Programme, Supported by Danida*, has piloted this approach through Integrated Water Resource Management Demonstration Projects in five countries: Malawi, Mozambique, Namibia, Swaziland and Zambia. Recognizing the importance of better integration across the water sector, the programme aimed to demonstrate how principles of Integrated Water Resource Management (IWRM) can be put into practice in rural areas with a focus on communal leadership. The focus was on those principles that have received limited attention as yet water resource management at the lowest appropriate levels, users' participation and the inclusion of women (Global Water Partnership Technical Advisory Committee 2000), (IWMI, 2009).

The projects have shown that community-driven water resource management is participatory and demand driven. It capacitates communities to manage their water resources sustainably, to solicit support from external agencies, and to co-design and implement water improvements according to their own needs and priorities. Further it improves access to water for multiple uses: drinking, sanitation, domestic uses, gardening, irrigated cropping, livestock watering, tree growing, crafts, food processing, small enterprises, fisheries, aquaculture, and ceremonial uses. This improves important dimensions of wellbeing, including health, alleviation of the domestic chores of water fetching, food production and income generation, (IWMI, 2009). However the focus of the water projects by *SADC Regional Water Sector Programme* is quite wide which makes this project appropriate. This study will be localized to a Kenyan set up and examine the level of communal leadership in the management of the Namelok water management project in Kajiado County.

Day (2009) observed that in arid environments community water management often still focuses exclusively on management of water assets as foreign practitioners do not often consider the importance of providing communities with information concerning their available water resources. Consequently the association between water resource availability, groundwater recharge and sound stewardship is often missing, to the

detriment of end water users. In his article, he describes an eight-stage process to build a framework for managing water resources which is being implemented in Darfur. It involves end-users in assessing water use, the risks to water quantity and quality, and in prioritizing the use of water to meet the needs of all stakeholders.

The current emphasis of traditional community water management remains centered on management of water assets. This potentially limits both practitioners' and communities' ability to assess safe or appropriate water abstraction levels and may actually reduce the need for foreign practitioners to have a well-rounded contextual understanding of inherent problems. This may inadvertently lead to neglect in planning for drought or when designing the most appropriate water supply systems (Day, 2009). The three pillars model promotes: moving towards an enabling environment of appropriate strategies, policies for sustainable water resource development and management; putting in place the institutional framework through which strategies, policies and legislation can be implemented; setting up the management instruments required by the institutions to do their job.

Despite sparse rural population densities and relatively low abstraction rates from individual water sources across sub-Saharan Africa, rural communities remain vulnerable to water depletion. Mitigating water resource depletion remains a pre-requisite for poverty alleviation. The potential implications of excluding resource management are significant. Large-scale conflicts such as those in Darfur and Chad are often simplified and categorized as conflicts over natural resources (fertile land, wood and water). In reality drought and ecological degradation have not directly created conflict in Darfur and Chad, but when these factors are combined with mismanagement and poor planning of water resources, under-investment in commercial agriculture and the collapse or politicization of traditional systems of governance, the links become vivid. Darfur in particular exemplifies how interference from central authorities, poor governance over natural resources and environmental degradation, combined with low and variable rainfall patterns, can destabilize rural communities (Day, 2009).

The concept of Integrated Water Resource Management (IWRM) emerged from the Dublin Principles in 1992. IWRM practices encourage decentralization of water resource management and the process has been viewed as a vehicle for reforming management of both land and water resources. One criticism leveled at this broad and often theoretical process, however, is that ‘water reformers’ have often tended to ignore or even erode community-based water management and customary water law as they have pushed forward broader concepts that often remain too large to either manage or implement. This is striking because many water resource management reform programmes in Kenya, financed by international donors, have the specific aim of improving the use of water for these informal and often marginalized water users (Victor, 2011).

Mutuma (2012) carried out a study on the *Challenges and Prospects for Sustainable Water Supply for Kajiado Town, Kajiado County*. The objectives were to review the policy, legal and institutional framework for water supply in Kenya, evaluate the existing water supply systems in the town, establish the water demand and opportunities for a sustainable water supply such as an integrated water supply plan for Kajiado Town. The study adopted a participatory approach in which residents and a range of stakeholders were involved in the whole process. It used generalized survey design with triangulation to ensure multiple sources of evidence for validity and reliability of the study. The study methodologies employed in data collection were both qualitative and quantitative as described in this chapter. The study used both primary and secondary data such as questionnaires, interview schedules and reference from books, journals, internet among others. The data was analyzed by the use of SPSS and presented in tables, charts and prose.

The findings showed that there was an apparent lack of statutory way of prioritizing allocation of water resources as evidenced by diversion of water from Norturesh – Athi River – Kajiado pipeline for irrigation even when domestic demand had not been met. It was established that Olekejuado Water and Sewerage Company had a weak technical and resource capacity to meet the water demand for the town. Whereas this study was closely related to the current one, it only highlights lack of leadership as one of the challenges

facing the water project in the County. However the current study critically analyses the level of community participation among the communities benefiting from the Namelok Water Project in Kajiado County. It will not look at the role of the water management bodies appointed by the government or the county government but assess whether there is community participation leadership in this project and how it has influenced the achievement of the water project's objectives.

2.3 Capacity Building on Water Resource

Community capacity building (CCB), also referred to as capacity development, is a conceptual approach to social or personal development that focuses on understanding the obstacles that inhibit people, governments, international organizations and non-governmental organizations from realizing their development goals while enhancing the abilities that will allow them to achieve measurable and sustainable results. The term community capacity building emerged in the lexicon of international development during the 1990s. Today, "community capacity building" is included in the programs of most international organizations that work on development, the World Bank, the United Nations and non-governmental organizations (NGOs) like Oxfam International. However, the wide use of the term has resulted in controversy over its true meaning (Jamie and Serdar, 2010).

According to Zamila and Nahukul (2011), community capacity building often refers to strengthening the skills, competencies and abilities of people and communities in developing societies so they can overcome the causes of their exclusion and suffering. Organizational capacity building is used by NGOs to guide their internal development and activities. Many organizations interpret community capacity building in their own ways and focus on it rather than promoting one-way development in developing nations. Fundraising, training centers, exposure visit, office and documentation support, on the job training, learning centers and consultants are all some forms of capacity building. To prevent international aid for development from becoming perpetual dependency, developing nations are adopting strategies provided by the organizations in the form of capacity building,

The United Nations Development Programme (UNDP) was one of the forerunners in developing an understanding of community capacity building or development. Since the early 1970s the UNDP offered guidance for its staff and governments on what was considered "institution building". The UNDRR defines capacity development in the DRR domain as "the process by which people, organizations and society systematically stimulate and develop their capability over time to achieve social and economic goals, including through improvement of knowledge, skills, systems, and institutions – within a wider social and cultural enabling environment (Deborah, 2003).

In order to facilitate community-driven capacity building on water resource management, there needs to be a long-term, sustainable, supportive environment in which the various support agencies collaborate horizontally and vertically, among themselves and with communities, in order to provide integrated services according to people's integrated needs. The challenge at intermediate (local government/district/municipal) level is to keep track of the demands of communities and to respond to those demands. At national and international level, agencies' role is to support the response Picoteam, (2007).

Accompanying interventions such as health and hygiene education, agricultural extension or marketing, further increase the benefits and productivity of water use. Thus, water is used most effectively. Rural communities are central to community-driven water resource management. A process is facilitated and capacity is built during all project phases so that the communities learn to lead the selection, planning, implementation and monitoring of infrastructure improvements and other water activities supported by external agencies. Community-driven water resource management builds upon communities' past development and management of local water resources and on their coping strategies to protect against the highly variable and unpredictable availability of water resources and volatile economic environments.

Communities and their leaders, including traditional authorities, contribute in time, cash and/or kind. This ensures ownership of the investments, which is a critical condition for the sustainability of the infrastructure and, hence, of continued livelihood benefits. For the current study, the researcher examines the forms of capacity building programmes that the beneficiaries of the Namelok Water Project draw from it. It will demonstrate these programs and how they have influenced the realization of the goals of the project.

Deborah (2003) opines that community-driven water resource management considers the integrated nature of water resources, technologies, users and uses. People take water from multiple interlinked sources: rain, run-off, surface water streams and ponds, groundwater and wetlands. They develop and use water concurrently for multiple purposes at homesteads and fields or by accessing open water sources. Involving communities in technology scenarios and making choices for siting and further design requires intensive capacity building but ensures an appropriate choice, adequate technical skills, and the ability to operate and maintain technologies. All community members are involved in community-driven water resource management, so women, the poorer members, HIV/AIDS victims and other sick people are included, as well as youths, in particular those who are heads of households. Through carefully crafted processes, the marginalized members of the community are enabled to express their voices and participate in decision making on an equal footing.

A range of support agencies can operate at intermediate and/or national levels: government line agencies from the different sectors: domestic water, health, irrigation, agricultural extension, fisheries, etc. They offer technical expertise that needs to be made available and called in as needed; different local and regional, national or international NGOs and donors. They can provide financial, technical and institutional support and may be skilled in community-driven participatory processes; private service providers, firms and contractors. Their specialized contributions can be procured for various tasks. Assigning tasks to local service providers brings further wealth to the area and can improve sustainability in service delivery; and last but not least local and district government Picoteam, (2007).

The local government, which is defined as the local authorities with the official mandate to coordinate service delivery to meet people's integrated needs, is pivotal in community-driven water resource management. As the permanent interface between communities and government and other agencies, local government drives the longer-term local planning processes in which community-driven water resource management is embedded Picoteam (2007). Whereas this is true for the current study examines the extent to which these views have been incorporated in the effects of community participation on performance of Namelok Water Project in Kajiado. While Pico team's views are based on the theoretical basis up which capacity building issues in project management are anchored on, the current study will test its practical applicability in the management of the water project and hence give it an empirical application. Further the study will test the extent to which the level of capacity building among the beneficiaries has influenced the management of the Namelok Water Project.

Local government is also vital in creating a supportive environment by mobilizing support from intermediate, national and international-level agencies as needed. Thus, the role of local government in each project cycle encompasses: coordinating resource allocation and communities' own contributions, and setting selection criteria for communities; facilitating participatory planning for district development plans; and calling in financial, technical and institutional support as needed for local integrated needs, and overseeing procurement procedures for post-construction 'after-care such as for infrastructure operation and maintenance and accompanying interventions; liaison with traditional authorities and other stakeholders; capacity building of communities where applicable; continuous monitoring; and feeding newly identified needs into local planning processes Picoteam (2007), IWMI, (2009).

Luwesi et.al. (2014) have highlighted that Kenya was at the brink of an environmental disaster as most of its watersheds were experiencing water stresses, which resulted in deadly conflicts on ownership of the little available resources. In the main cities of Machakos, Nairobi, and Mombasa water supply was unreliable and limited in coverage. The Government was therefore unable to supply water services while managing the

resources at the same time. In 1999, the government initiated a reform, which culminated with the development of *The Water Act 2002*. The new legislation attributed the supply of water services to water-businesses and reserved itself the right to manage the resource in consultation with the public. A bottom-up approach was suggested for the management of water resources through the creation of “Water Resource Users’ Associations” (WRUAs). The latter needed to work closely with the “Water Resources Management Authority” (WRMA).

But how was this new legislation to be implemented? Until 2005, no strategy was available. In pursuant of the Water Act 2002 and water sector reforms, the German International Cooperation (GIZ and DAAD) supported the National Water Resources Management Strategy 2007 (NWRMS) to enable the Water Resource Management Authority (WRMA) implement Integrated Watershed Management (IWM) approaches in Kenya. Therefore the University Siegen (Germany) in partnership with Kenyatta University (Kenya) organized three DAAD Alumni Summer Schools in Meru, from 2006 to 2008, with the logistical and financial supports of the GIZ and DAAD. The latter were to strengthen local stakeholders’ capacity in addressing issues and challenges pertaining to water resources management. The study used both qualitative and quantitative analytical tools to describe and examine the learning process put in place by the German International Cooperation to instill a participatory watershed management practice in Kenya. It assessed key actors and their respective roles, outlined challenges met, and anticipated the actual impact of these Summer Schools on the ground Luwesi et al, (2014).

Results show that DAAD Alumni played a major role in training local stakeholders in designing, organizing, implementing, monitoring and evaluating participatory water resources management plans. Both locals and professionals, mainly constituted by WRUA and WRMA representatives, played a key role during case studies, the interpretation of the law and governmental policies, as well as providing local expertise during fieldwork. The learning process involved a holistic and interdisciplinary approach of problem assessment and resolution. Thus some participants may have been challenged

to interact freely and easily with unacquainted ones while others were monopolizing the debate. Nevertheless, the final outcome was positive and greatly contributed to the development of a sustainable and integrated watershed management approach that is being implemented at the local level in most of the watersheds of Kenya Luwesi et al, (2014). The current study is also based on these findings, but will test their application in a semi-Arid Environment of Kajiado County. It will examine the extent to which the communities benefiting from the Namelok Water project have been empowered and are involved in the management of the water project.

2.4 Community perceptions on water resources

Community management is acknowledged as central to the provision of essential services like clean water facilities to underserved communities in developing countries. The role of active community management in ensuring sustainable development is obviously recognized as the most important factors and agents of development (FAO, 2003); Gebremedhin, (2004). Development requires participation of the native people, who should be placed first in development projects aiming at improving and changing the livelihood of local people. Development project like water resources programmes affect the life of indigenous people both directly and indirectly; since they live with water resource and they are primary users of such resources; Wily,(2002), FAO, (2010).

The level of communal management in water resources is one of the key ingredients of an empowered community. It is a principle so important that has made active citizen involvement in all aspects of strategic plan development and implementation; Reid, (2000). Water Resource Management (WRM) has emerged as a means to move away from a traditional sub-sector approach to water provision to a more holistic or integrated approach to water management (WaterAid, (2011)). At the basin level, there is a mix of formal and informal arrangements, but the formal predominates, partly due to the fact that informal arrangements are often localized and do not encompass the whole basin as yet. This results partly from the general failure of formal national and basin-level water management systems to appreciate the informal arm (Sokile & van Koppen, (2004)). At the catchment and sub catchment levels, informal institutions gain strength and the patterns of the formal-informal interface become clearer.

Access to water is fundamental to human survival, health and productivity. Therefore, it is necessary to ensure the sustainability of people's access to water, and to the environment which is dependent upon it. As pressures and demands on this limited resource increase, the need to find new and innovative approaches to providing it becomes more apparent and more urgent WaterAid, (2011). The use of participatory management approaches is one of the principles of the Dublin convention; GWP, (2000). The Dublin convention Principle No. 2 states that; "water development and management should be based on a participatory approach, involving users, planners and policy-makers at all levels.

Community participation in management of the water resource denotes the involvement of the communities in taking care of the water source. This includes participating in decision making and undertaking some activities which would not destroy water source. The greater the control of resources is given to outsiders the less local communities can be involved at critical decision making stages; Agrawal, (2001). However, participation can stimulate an on-going learning process by increasing awareness of collective responsibility within the community, whereas in managing the water source, in case of this study the spring, the communities can get clean and safe water. Bell (2001).

According to Dungumaro and Madulu (2002) local communities in various areas of Tanzania has developed coping strategies to ensure conservation of water resources. However, some of the traditional strategies have been eroded by modernization factors and population pressure to the extent of affecting water quantity and quality. Management, river ecology and the quality of water through pollution and silt sedimentation. There has been an increase of problems over time that subject water resources to a number of crises and pressures. Poor water resources management have stimulated and sustained a number of problems related to health, socioeconomic and environment, which need to be solved Dungumaro and Madulu, (2003). These problems are accelerated and magnified by the countries, communities and individual's initiatives for economic and social development as many development activities are affected by water availability.

Water is essential to life because it heavily influences public health and living standard. However, water is unequally distributed throughout the world. At present, approximately 1.2 billion people live in areas wherein water is scarce and 1.6 billion people face economic water shortage. Therefore, the World Health Organization, United Nations Children's Fund, various governments, and public and private sector entities have exerted intensive efforts to provide sufficient water supply to residents, particularly in rural areas in developing countries. Over 2 billion people have gained access to improved water supplies since 1990. The Percent of the world's population that has access to drinking water has increased from 77% to 89% between 1990 and 2010. This Percent is expected to increase further to 92% by 2015 to meet the drinking-water target of the Millennium Development Goals, i.e., halve the proportion of the population without sustainable access to safe drinking water by 2015. Meanwhile, the United Nations estimates that the domestic water consumption of developing countries is expected to increase by over 50% because of improvements in water supply, living standards, and water appliances. As a result, given the unpredictable global demand for water, serious and chronic water shortages may still persist in developing countries; MGD, (2015).

Participation in development undertakings has not been achieved to the desired level of satisfaction due to various reasons. For example, evidence from literature suggests that there is a wide range of factors that could hinder and constrain the promotion of participation, and these often leads to the emergence of non-participation; Cohen and Uphoff, (2012). Such prohibiting participation obstacles abound and range from institutional, socio-cultural, technical, logistical, and are spread over a seemingly-endless spectrum. Obstacles can also be external, internal and or a combination of both. External obstacles refer to those factors outside the end-beneficiary community that inhibit or prevent true community participation from taking place.

External obstacles include the role of development professionals, the broader government orientation towards promoting participation, the tendency among development agencies to apply selective participation, and their technological-financial bias. On the other hand, internal obstacles refer to conflicting interest groups, gate-keeping by local elites, and a

lack of public interest in becoming involved; Cohen and Uphoff, (2012). Some of the obstacles such as excessive pressure for immediate results and technological-financial bias can either be internal and external characteristics or both. Individual and group motivators appear to be context-specific and locality-bound rather than universally-definable.

Schonten and Morriarty (2014) have put forward two factors to explain limited community participation in the water projects covered in their study. They found that internal factors like lack of community commitment, leadership, communication, and lack of participatory skills, unrepresentative in water communities, technical issues, strong traditions, misplaced priorities and financial problems were responsible for the limited participation. On the other hand, external factors such as non – existence or weak supply machine, lack of standardized technologies, poor design and construction fault, interference with politicians environmental issues which have a big impact on the development of the water projects limited participation. Due to these reasons, the authors observed that the real poor have rarely been consulted about what they want from development. It can, therefore, be argued that decentralized government structure in Tanzania to ensure the involvement of villages/wards development committees in planning is a step towards the realize run of this goal.

However, region and district bureaucracy has undermined community participation. The importance and the potential benefit of involving the clientele in development programmes have been well highlighted in this chapter. It has also been noted that attempts to institute participation appear to face problems that are largely administrative in nature. This has been the case in Tanzania as well as in the other countries. This implies that the establishment. James and Mdoe (2012) asserted that, participatory planning is frequently unsustainable despite the façade of bottom-up planning, District plans are still largely determined and strongly influenced by administrators. Planned villages or the enactment of Villages and Local Government Acts in 1982 should be seen as necessary rather than sufficient condition for community participation. The problems of bottlenecks in the way of community participation must be mitigated if the genuine

interest of encouraging Tanzanians to shape their destiny through co-operative undertakings is to be realized.

2.5 Theoretical Framework

2.5.1 Community Organization Model

The theory was developed by FAO (2003), the theory presumes that in order to participate meaningfully in co-management, certain stakeholders need to form an organization that can assume the responsibilities in behalf of the larger community. In natural resources management field, this theory is applicable in the case where external agency is involved to initiate a natural resource management campaign and its fate handled by the community. Thus, a structure in the form of organization which has to be managed by the community themselves for enhancing sustainability of the initiative is necessary for managing the water resources for the benefit of the current and future generation.

Community Organization describes the distribution of power & resources in society, how organizations function, and how community systems maintain themselves. It is a participatory decision-making process that empowers communities to improve health. It emphasizes active participation in identifying key health issues and strategies to address them. Communities focus on their strengths and collectively mobilize to develop programs to achieve health goals. Characteristics of the Community Organization Model include, understanding the context and root causes of health issues, collaborative decision making and problem solving, focusing efforts on specific issues, actively engaging participants from various groups and organizations within the community, developing and maintaining capacity and power to produce lasting change and providing feedback to the community (Reid, 2000).

2.5.2 Social Capital Theory

Social capital may be defined as those resources inherent in social relations which facilitate collective action. Social capital resources include trust, norms, and networks of association representing any group which gathers consistently for a common purpose.

Social capital is a form of economic and cultural capital in which social networks are central, transactions are marked by reciprocity, trust, and cooperation, and market agents produce goods and services not mainly for themselves, but for a common good. The term generally refers to resources, and the value of these resources, both tangible (public spaces, private property) and intangible (actors, human capital, and people), the relationships among these resources, and the impact that these relationships have on the resources involved in each relationship, and on larger groups. It is generally seen as a form of capital that produces public goods for a common good.

Social capital has been used to explain the improved performance of diverse groups, the growth of entrepreneurial firms, superior managerial performance, enhanced supply chain relations, the value derived from strategic alliances, and the evolution of communities. Hanifan's (1961) article regarding local support for rural schools is one of the first occurrences of the term social capital in reference to social cohesion and personal investment in the community. In defining the concept, Hanifan (1961) contrasts social capital with material goods by defining it as that in life which tends to make these tangible substances count for most in the daily lives of people, namely, goodwill, fellowship, mutual sympathy and social intercourse among a group of individuals and families who make up a social unit.

If man may come into contact with his neighbor, and they with other neighbors, there will be an accumulation of social capital, which may immediately satisfy his social needs and which may bear a social potentiality sufficient to the substantial improvement of living conditions in the whole community. The community as a whole will benefit by the cooperation of all its parts, while the individual will find in his associations the advantages of the help, the sympathy, and the fellowship of his neighbors Hanifan, (1961).

John Dewey used the term in his monograph entitled "School and Society" in 1900, but he offered no definition of it. Jane Jacobs used the term early in the 1960s. Although she did not explicitly define the term *social capital*, her usage referred to the value of networks. Political scientist Robert Salisbury advanced the term as a critical component of interest group formation in his 1969 article "An Exchange Theory of Interest Groups" in the *Midwest Journal of Political Science*.

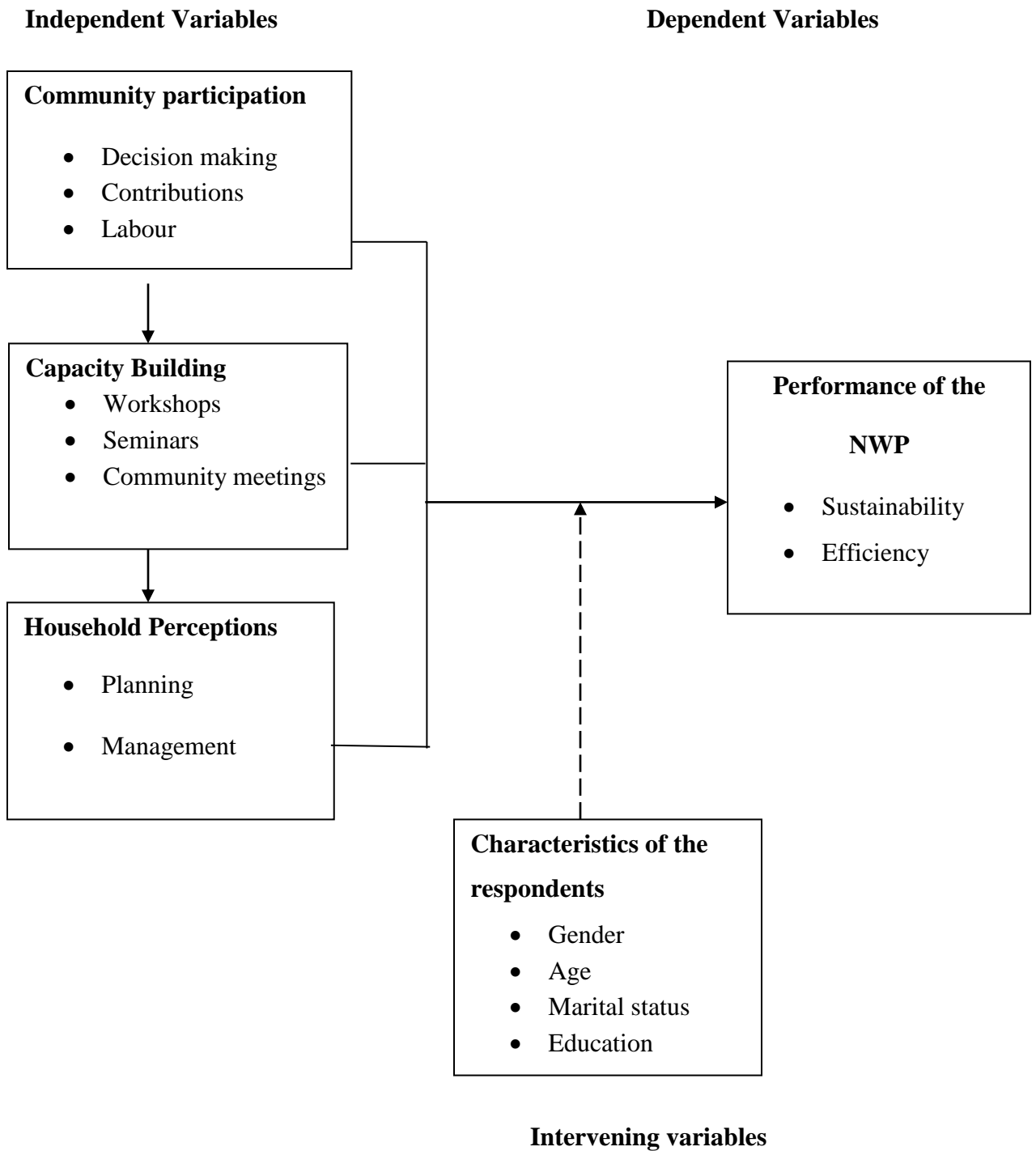
This vision was strongly criticized at the end of the 20th century, with the development of the idea of Homo Economics and subsequently with rational choice theory. Such a set of theories became dominant in the last centuries, but many thinkers questioned the complicated relationship between modern society and the importance of old institutions, in particular family and traditional communities Ferragina, (2010). They were convinced that industrialization and urbanization were transforming social relationship in an irreversible way. They observed a breakdown of traditional bonds and the progressive development of anomie and alienation in society; Wilmott, (1986).

The theory has been applied in the current study to demonstrate how the power of community governance can be used to mobilize community participating in water resource management. The appearance of the modern social capital conceptualization is a new way to look at this debate, keeping together the importance of community to build generalized trust and the same time, the importance of individual free choice, in order to create a more cohesive management of common resources such as water.

2.6 Conceptual Framework

In this study, characteristics of the respondents, communal capacity building are the independent variables performance of the water project is the dependent while management of water is the dependent variable, community participation is the intervening variables as shown in the figure 2.1 below.

Figure 2.1. Conceptual Framework



The researcher argues that effective management of the Namelok Water Project can be achieved through sound community participation, from all stake holders and communal capacity building. However, this could be hindered by characteristics of the community and their level of education.

2.7 Operational Definitions

Table 2.1. Operational Definitions

Variable	Indicators
Characteristics of the respondents	<ul style="list-style-type: none"> • Gender • Age • Marital status • Education
Community participation	<ul style="list-style-type: none"> • Management of the organization • Decision making • Resource Contribution • Autonomy
Communal capacity building	<ul style="list-style-type: none"> • Awareness • Empowerment • Mentorship • Training • Experience
Household perception	<ul style="list-style-type: none"> • Management of the organization • Decision making
Performance	<ul style="list-style-type: none"> • Sustainability of the project • Efficiency of the project

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the methods and methodology that was used in this research. The chapter presents research design that was used, the research site, target population, sample size, sampling design, and the pre-testing of the research tools. It also presents data collection instruments used, the procedures employed in the collection of the research data, and its analysis and presentation of the findings.

Research can be defined as a way of collecting data, interpreting it and presenting the findings to the public Creswell (2003) defines research as a process or steps used to collect and analyze information to increase understanding of a topic or issue. Kumar (2004) describes research methodology as a procedural plan that is adapted by the researcher to answer questions validly, objectively, accurately and economically. Chakbarti (2009) argues that research methodology as an approach and set of supporting methods and guidelines to be used as a framework of doing research.

3.2 Research Design

This research mainly was descriptive in nature on the effects of community participation in the management of the Namelok Water Project in Loitoktok Sub County of Kajiado County; Chandran, (2004), emphasizes that descriptive design was most appropriate when used to portray characteristics of an event, situation, a group of people, community or a population. Descriptive research allowed the researcher to develop a profile about a situation or community of people. This was done by getting accurate information through communication between the researcher and informants with the use of questionnaires and interviews.

3.3 Site Description

In Namelok, the local community is sparsely populated with the local Maasai community owning big farms. The landscape is almost flat. The vegetation cover is only grassland and small shrubs. The local community comprises of the Masaai community whose economic mainstay is small scale subsistence cropping mainly maize and other food security crops and also large scale livestock keeping especially cows and goats with some donkeys to help in transport especially fetching water. Lack of an elaborate water supply in the area has impacted negatively to the social economic status of the local community (Kariuki, 2014).

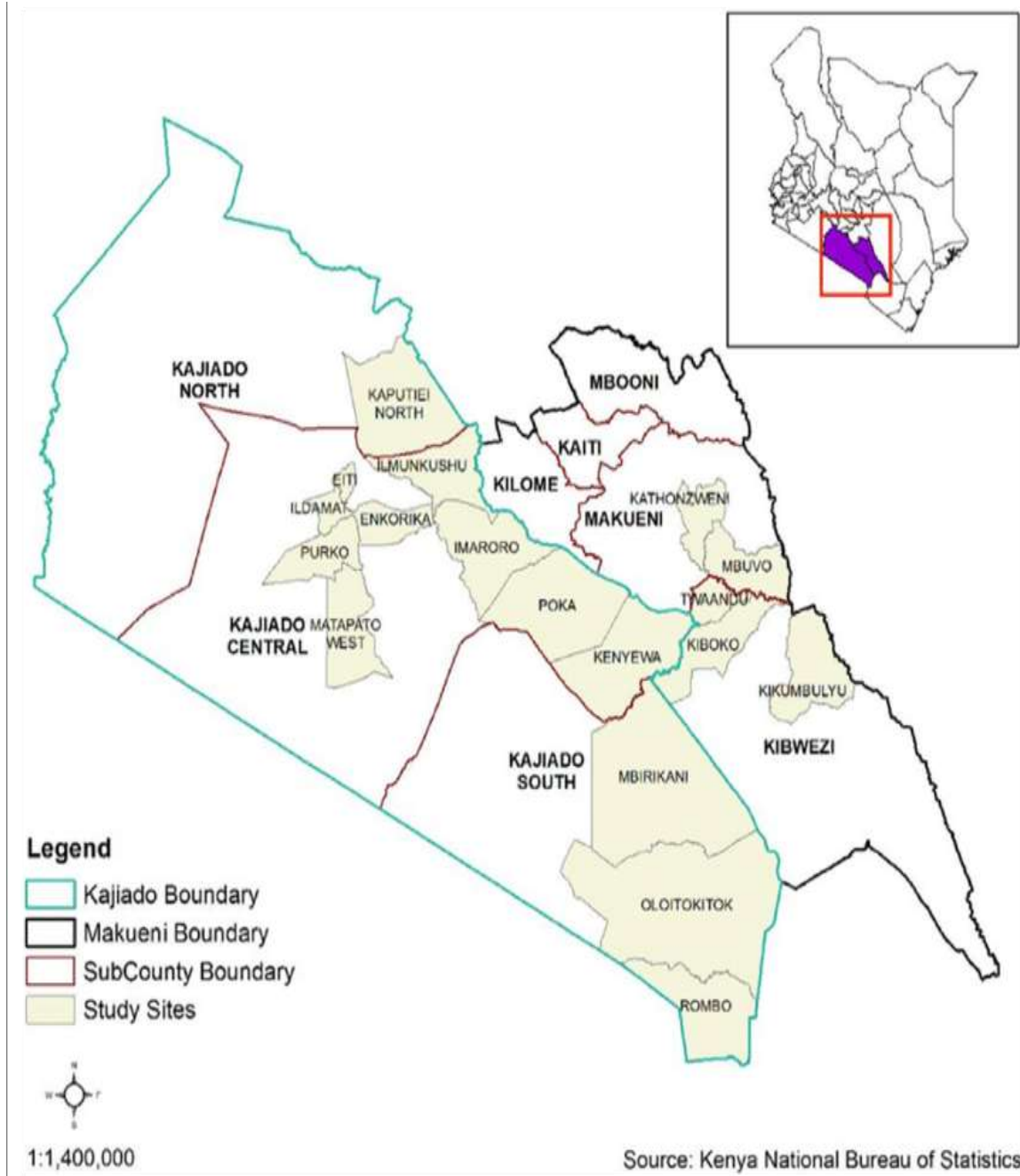
The borehole site is located at approximate latitude 01° 48' 10" south and longitudes 36° 59' 34" East in Namelok area of Mashuru district in Kajiado County. The project area is generally used for small scale subsistence cropping especially maize and other food security crops but Livestock keeping is the economic mainstay of the local Maasai community (Athi Water, 2014). The project site lies at about 1636 meters above sea level. The ground landscape is generally flat with slightly elevated ground bisected by wide depositional valleys. The climate of the study area is arid and semi-arid type in character with dry and wet periods. The rainfall of the area is about 500 millimeters annually distributed in short and long rains of September to December and March to May respectively.

Temperatures rise steadily to highs of about 35 degrees centigrade and to lows of about 16 degrees centigrade. The geology of the study area is dominated by the volcanic rocks. These rocks consist mainly of basalts and phonolites with their weathered products of late rites and clay, these volcanic rocks are underlain by the rocks of the basement system (Berk, 2009). These basement rocks have undergone structural process of faulting, folding, shearing and cracking. The project area is predominantly used for small scale subsistence cropping for food security but majority of the area is grassland used for the livestock grazing by the local Maasai community. The area is relatively bare without

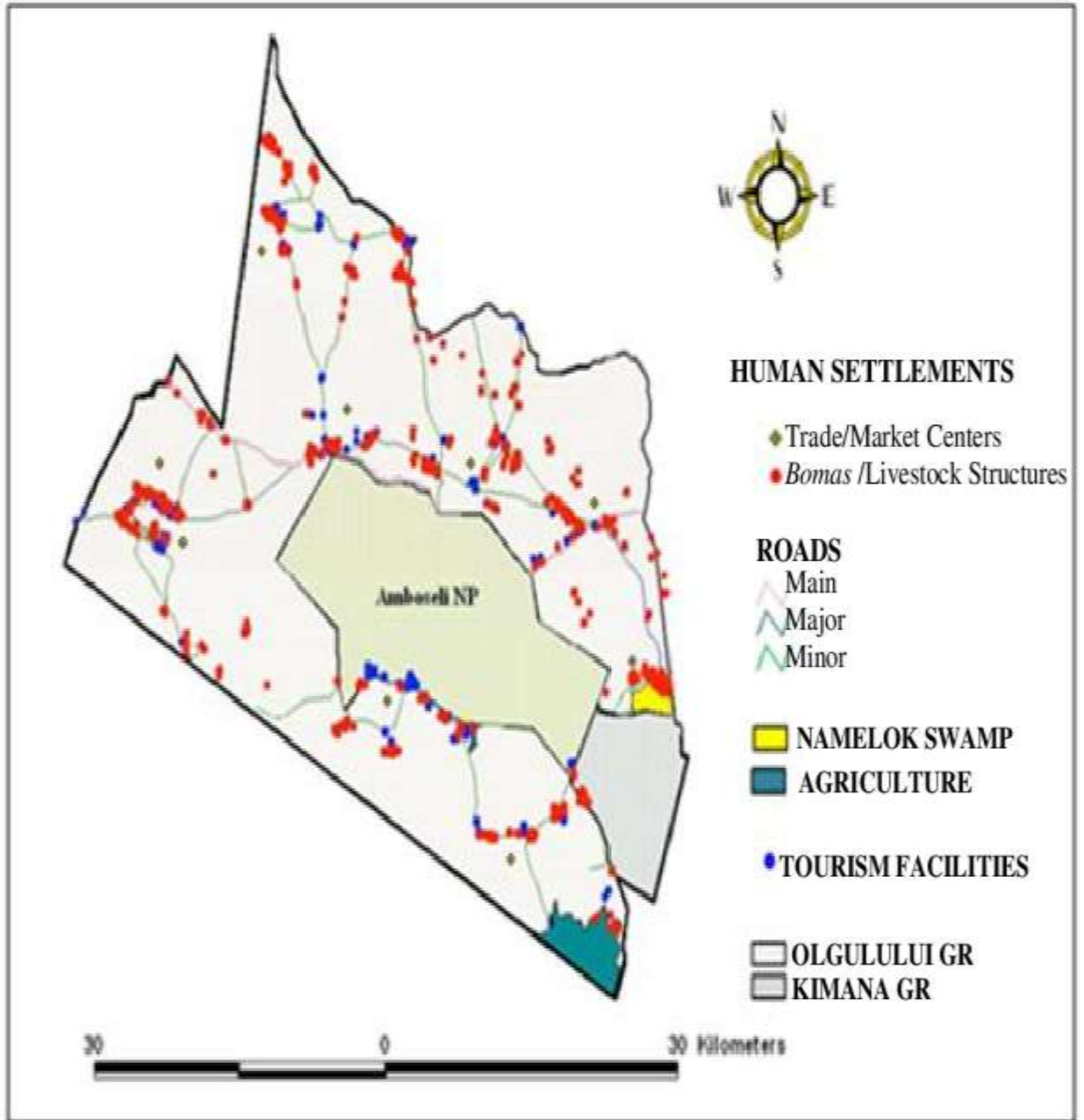
trees only the small shrubs found here and there. The local community should be encouraged to plant exotic trees to make the area environmentally friendly.

The project area is sparsely populated with the local Maasai community having huge individual farms and the flora and fauna found in the area is the indigenous vegetation cover mostly of shrubs and grass which has been tampered with to give way to subsistence cultivation to a small scale. In Namelok, the local community is sparsely populated with the local Maasai community owning big farms. The landscape is almost flat. The vegetation cover is only grassland and small shrubs (Eshum, 2008). The local community comprises of the Maasai community whose economic mainstay is small scale subsistence cropping mainly maize and other food security crops and also to a large scale livestock keeping especially cows and goats with some donkeys to help in transport especially fetching water. Lack of an elaborate water supply in the area had impacted negatively to the social economic status of the local community as shown in Map I and II.

Map I: Kenya Showing Kajiado County



Map II: Kajiado Showing Namelok



3.4 Units of Analysis

The units of study was Namelok Water Project and community members within Kajiado County while the unit of observation was households that were participating in the project.

3.5 Target Population

Population refers to every individual case that possesses the characteristics of interest to the researcher Jones, (2010). In other words, population is the aggregate of all that conforms to a given specification. The target population of this study were beneficiaries of Namelok Water Project. According to the current strategic plan for the project, there were 150 beneficiaries who include community members/leaders and the employees of the project who were the target population for the study.

3.6 Sampling of Units of Study

3.6.1 Sampling size

Sampling is the process of selecting a number of individuals for a study in such a way the individual represents a larger group from which they are selected; Erik, (2011). A sample is a small proportion of the target population. For the current study, the researcher has applied Mugenda and Mugenda's (2003) recommendation of picking on 10-30% of the target population as the sample size. Therefore, the researcher picked on 30% of 150 giving a sample size of 50 respondents. This was sufficient for the relevant research and it fulfilled the required efficiency, representativeness, reliability and validity. Mugenda & Mugenda (2003) noted that a sample size of 30% to 50% of the target population is large enough to represent the whole population.

In selecting the sample size from the beneficiaries, the systematic sampling technique to select the actual sample from the list of 150 beneficiaries, the list included the community members and community leaders in charge of the project. In Black's (2004), viewed this method is a type of probability sampling method in which sample members from a larger population are selected according to a random starting point and a fixed periodic interval.

This interval (the sampling interval) is calculated by dividing the population size by the desired sample size.

In the current study, this method was used in selecting the beneficiaries. The first three cases were written on chips of paper one chosen for inclusion in the sample. Thereafter the researcher chose every 3rd case in the list giving a sample size of 50 beneficiaries.

3.6.2 Key informants

The key informants were the community leaders in charge of the project. They were only interviewed once as leaders of the project.

3.7 Data collection Methods and Procedures

According to (Kumar, 2004), data collection procedures specify the details of the tasks with emphasis on the data to be obtained and their sources. There are several data collection methods that can be used in the collection. These methods are tests, interviews, key informants, questionnaire and observations; Kombo & Tromp, (2006). For the purpose of collecting data for this study, the researcher used questionnaires on beneficiaries. To be able to reach sampled households heads the researcher was assisted by project leaders, chiefs, and assistant chief and village leaders.

The beneficiaries were interviewed using a questionnaire because they are few and the information given was vital in the assessing the context of the study. Interview is the verbal conversation between two people with the objective of collecting relevant information for the purpose of research. They were particularly useful for getting the story behind a participant's experiences where the interviewer asks questions and the interviewee responds, with participants taking turns talking although information transfers can happen in both directions simultaneously, (Polak and Green, (2015).

Finally, key informant interviews were conducted on community leaders. This is because they are very instrumental in giving a detailed account of the subject of study and the assist the researcher in understanding the extent of community participation on the management of the Namelok water resource management. According to Mountain States Group, (1999), the purpose of key informant interviews is to collect information from a wide range of people, including community leaders, professionals, or residents who have first-hand knowledge about the community.

3.8 Instrument Pre-testing

Mugenda (2003) asserts that the accuracy of data to be collected largely depends on the data collection instrument in terms of validity and reliability. Pretesting is 1% to 10% depending on the sample size. For this, the researcher did a pretest using the instruments to ensure their reliability, validity and consistency. In this study pre-testing of the research instruments was undertaken within Isinet as a pilot study. Consequently they were edited in light of the outcomes of the pilot study. The essence of pre-testing was to provide the real test of the questionnaire and the mode of administration. For that reason it enabled the shortcomings of the instruments to be identified and prediction of the extent of non-response likely to take place. It was done in a neighboring Isinet community next to the ones served by Namelok Water Project.

3.9 Data Analysis

Before processing the responses, data preparation was done on the completed instruments by checking, coding, and entering the data in the computer for storage and easy access and Microsoft excels. The data was then analyzed using descriptive statistics. The descriptive statistical tools were helpful in describing the data and determining the respondents' degree of agreement with the various statements under each factor. The output was presented in the form of tabulations, percentages, interpreted and conclusions made accordingly.

3.10 Ethical Considerations

Ethics in research requires personal integrity from the researcher. Cooper and Schindler (2006) give the goals of ethics in research as to ensure that no one is harmed or suffer adverse negative consequences from research activities. Therefore the researcher ensured that the instruments were non-invasive and the information gathered solely for academic purposes. Before the distribution of the research instruments, the researcher sought permission from the Namelok Water Project in order to create a working relationship and agree on the data collection plan. Thereafter the data was collected as per the agreed plan and adjustments made accordingly where possible.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

In the previous chapters, we reviewed the literature on concepts and theoretical background of the effect of community participation on the performance of water resources. In this chapter we present data which are on characteristics of the beneficiary households, their participation, benefits from the water project, and capacity building and respondents perceptions of the water project.

4.2 Namelok Water Project

The project provides up to 40,000 cubits of water which serves up to 2000 households as indicated by a majority of 70%. The project was completed in 2014 as agreed by majority of the respondents and they indicated that breakage and theft of taps was a major challenge that the community was experiencing (Gathagu, and Agwata, 2014). In Namelok, the local community is sparsely populated with the local Maasai community owning big farms. The landscape is almost flat. The vegetation cover is only grassland and small shrubs. The local community comprises of the Masai community whose economic mainstay is small scale subsistence cropping mainly maize and other food security crops and also to a large scale livestock keeping especially cows and goats with some donkeys to help in transport especially fetching water. Lack of an elaborate water supply in the area had impacted negatively to the social economic status of the local community (Kariuki, 2014).

4.3 Characteristics of the Respondents

The first objective of the study was to determine the influence of characteristics of the respondents on performance of Namelok Water Project. The characteristics were; gender, age bracket, marital status, education, occupation of the heads of households, marital status, number of children, and length of residence in the community. The characteristic

could explain the level of member’s participation in the project, why some participated more than others.

Gender: The analysis on gender showed that 74 percent of the respondents were male while 26 percent were female participants. This indicated that majority of the respondents were males. The table below 4.1 shows the representation of the gender respondents.

Table 4.2. Gender of the Respondents

Category	Number	Percent
Male	37	74
Female	13	26
Total	50	100

Age: Table 4.2 shows that most of the respondents (34%) were of the age bracket 30-39, a sizeable number 20% were 40-49 years, below 29 years was represented by 16%, 50-59 years by 12% while over 60 years was represented by 18%. The study deduces that majority of the respondents were aged between 30-49 years. These younger and middle age categories were likely to be concerned with lack of water and to take action to solve it.

Table 4.3. Age of the Respondents

Category	Numbers	Percent
Below 29 Years	8	16
30 – 39 Years	17	34
40 – 49 Years	10	20
50 – 59 Years	6	12
Over 60 Years	9	18
Total	50	100

Education: Education level of community members is key, especially on community participation in projects such as one studied. This was shown by the response rate on the level of education where those from the primary level were represented by 14% who were the minority; secondary level of education was represented by 42% while 44% represented diploma/university graduates. This finding implies that the community had at least well educated individuals who could not only initiate but also manage the water project studied.

Table 4.4. Level of Education of the Respondents

Category	Number	Percent
Primary	7	14
Secondary	21	42
Diploma/University	22	44
Total	50	100

Marital Status: Marital status of the respondents was examined in table 4.4 which showed that majority of the respondents were married with a representation of 50%, singles by 24%, widowed by 16%, while those who were separated for one or another reason by 8%. Under any other there were those who were divorced with a representation of 2%. That is more of the respondents being married were likely to be more affected by the problem of water and to take steps to solve it and were also likely to manage the project effectively.

Table 4.5. Marital Status of the respondents

Category	Number	Percent
Single	12	24
Married	25	50
Widowed	8	16
Separated	4	8
Divorced	1	2
Total	50	100

Occupation of the Heads of Households: The occupation of respondents was examined and a majority of them were farmers represented by 38%, housewives were represented by 22%, self-employed by 24%, while wage employed were represented by 16%. This indicated that more of the respondents were farmers and housewives and water was important to them not only for domestic use but also for livestock and crops

Table 4.6. Occupation of the respondent sampled

Category	Number	Percent
Housewife	11	22
Farmers	19	38
Self-employed	12	24
Wage Employment	8	16
Total	50	100

Marital Status: The family setup of the respondents showed that those who had monogamous families were the majority with a representation of 74%, while those with polygamous were 26%. From the analysis most of the families had children between 4 to 6 children while those from polygamous families had over 10 children dependents who relied on their extended families for support. The families would require more water for their use and might also have played a leading role in starting and managing the project.

Table 4.7. Marital Status

Category	Number	Percent
Monogamous	37	74
Polygamous	13	26
Total	50	100

Period of residence in the community: Majority of the respondents who had lived in the area for between 10 to 19 years were represented by 36%. Those who had lived for less than 4 years were represented by 8%, those of 5 – 9 years by 34% while those who had lived for above 20 years were represented by 22%. This shows that more than 90% of the residents had lived in the area for many years hence were well conversant with the area and the impact of the project to their lives.

Table 4.8. Length of Residents of the Respondents

Category	Number	Percent
Less than 4 Years	4	8
5 - 9 Years	17	34
10 – 19 Years	18	36
Above 20 Years	11	22
Total	50	100

These characteristics show that the project had more male members, younger and middle aged with secondary and higher education. More were with children and other dependents and were farmers and housewives have been residents for more than five years.

4.4 Level of Community Participation

The second objective of this study was to examine the influence of community participation on the performance of the water project.

The project commenced in 2012 with an intention to provide the residents with sustainable water supply in the area. This was shown by a majority of 98% of the respondents who agreed with the idea that Namelok Irrigation Water Association in collaboration with African Development Bank supported the residents get clean water for their consumption. When we asked them whether they were participating in the project, 98% said ‘yes’ and the remaining 2% said no shown in table 4.10.

The major contribution of the respondents to the community project was to offer their commitment to manage the project and also financial support as well as offer their technical knowhow to sustain the project. This was shown by a representation of 55% who agreed that the commitment was to see the project succeed not for their generation but also for their future generation too.

When we asked the respondents to tell us the types of contributions they had made to the projects, they responded as shown in Table 4.8 which shows that a majority 40% contributed money, followed by labour, materials and ideas each of which was contributed by 20%.

Table 4.9. Respondent contributions to the water project

Type of contribution	Number	Percent
Labour	10	18
Money	20	40
Material	8	20
Ideas	10	20
Total	48	98

The researcher asked whether they have been involved in leadership at one point or another, 80% agreed they have been involved in the leadership of the project while 20% where not Most of the respondents were elected as the committee members of the project because they had knowledge on how the project could be being managed and the challenges that it was facing.

According to the KIIs there was a low level of community participation in making field visits, accessing information of progress reporting and attending meetings on progress reporting in Namelok water project. Reporting the progress of Namelok water project to the beneficiaries enhances transparency and accountability. The community develops trust with the project management and they can willingly contribute funds for the operation of the projects and this makes the projects to be sustainable. Carter (2010) noted that community participation in water supply and sanitation services in assessing their progress is critical for their sustainability. Project progress reporting meetings should be held regularly and the local community mobilized to actively participate. He also noted that the community should be offered a chance to query on the progress of the borehole water projects because this reduces chances of misappropriation of project funds.

Table 4.10. Leadership Positions held by the Respondents since joining the Project

Category	Number	Percent
Chairman	8	20
Secretary	10	20
Treasurer	5	10
Committee	25	48
Total	48	98

It was clear that although the project was funded by the World Bank, the respondents supplemented the support through various contributions and decision making through holding of different positions from its start to date.

Key interviews indicated that active involvement of community members in electing project leaders, attending meetings to discuss accountability and transparency and participating in decision-making should have resulted in enhance performance of the project. The reality, though, is that elections were mere formalities to maintain the status quo; members rarely attended project governance meetings, and were not involved in decision making for the project.

4.5 Level of Capacity Building

Acquiring of skills by members of the management through training could enhance the sustainability of community water supplies. A majority of the respondents were members of the community with a representation while minority were leaders of the project itself. The project had helped the residents by having the technical knowhow on how to maintain the canal to enable proper water flow to the farms or communal points. This was obvious because beneficiaries acquired skills to repair broken pipes and maintenance of tanks and taps. KIIs were of the opinion that the community cannot be a passive participant since it understands its needs, the dynamics of implementing projects in the locality and the accruing benefits, better than external donors. Social acceptability of the

project, reasonable sharing of benefits, mobilization of local resources and project sustainability are some of the reasons advanced for active community participation in project management. Water projects in particular call for participation of local communities in development initiatives since water is a basic but scarce commodity, often at the centre of conflicts between various types of users.

4.6 Community Perception of the Water Project

When the interviewees were asked to indicate whether the necessary planning was done by project operators to ensure the water project was implemented successfully, most of them indicated that the management team lacked project management skills.

When asked about their perceptions of performance of the water project. Majority of the respondents indicated that it was good with a representation of 50%, “very good” was represented by 24%, fair was represented by 16%, and poor by 8% while very poor was represented by 2%. The findings showed that more respondents’ perceptions of performance of the project was good and needed to be improved to reach other areas in the locality. The table shows that nearly all the respondents are positive and supportive of the water project.

Table 4.11. Respondents Perceptions of Performance of the Water Project

Category	Number	Percent
Very Good	12	24
Good	25	50
Fair	8	16
Poor	4	8
Very Poor	1	2
Total	50	100

4.7 Performance of the Namelok Water Project

Performance was indicated by the reports of the respondents about the benefits they derived from the project. We asked the respondents to indicate whether the water had been brought into their homesteads and 70% who disagreed while 30% agreed (Table 4.13). However in as much as the water had not reached their homesteads, the respondents agreed that the management of the project was working to ensure that all the residents had the water.

Further, it was established from the key interviews that project beneficiaries were active in contributing labour, relevant fees and materials for the project. Project donors were also active contributors of material and technical support, advocacy for the project and security for project staff and material. However, the operations and management aspect of the project required the input of technical experts.

According to the KIIs the Project donors and the government should mediate and help the Namelok Water Project community and leaders to develop a new constitution and elections' guidelines, supervise the election of a new project team and subsequent elections of committee members, and entrench a culture of holding regular accountability meetings where the views of community members are collected, respected and implemented. The study observed that the level of community participation in Namelok water project water project was generally low. This was linked to the fact that majority of the KIIs felt that the projects resources were not utilized effectively and efficiently to achieve the objectives of the project.

The residents paid maintenance fee that enabled the project's maintenance and to continue its operation. Nearly 98% agreed that the water was used for human consumption and livestock. The researcher noted that majority still accessed the water at a communal tap for at their homesteads the water had not yet been connected making them walk up to almost 2 kilometers to get the water. We also observed that the project

did not only help the residents but even the wild animals in the area came to drink the water at the communal points (Athi Water, 2014).

Table 4.12. Whether the water had been brought to the respondent’s homesteads

Category	Number	Percent
Yes	15	30
No	35	70
Total	50	100

These data show that when the water project was completed in 2014, majority respondents access it at communal water points. Effort is being made by project management to take the water to individual homesteads.

According to the KIIs community members were indifferent to the project by not visiting project sites, failing to attend meetings to discuss overall performance of the project and not requesting to scrutinize performance and progress reports. Project leaders were not willing to accept criticism and implement the recommendations of water users and this contributed to apathy in the community.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents a summary of the study findings, conclusions and recommendations to the management of the project and suggestions for further research.

5.1 Summary of Findings

From the analysis on gender showed that 74 percent of the respondents were male while 26 percent were female participants. This indicated that majority of the respondents were males. This showed that women were not being given high value in the society than their male counterparts, this shows that there are more men making decision than women. The study deduces that majority of the respondents (those in community) were aged between 30-49 years. These younger and middle age categories were likely to be concerned with lack of water and would like to take action to solve it. The community had at least well educated individuals who could not only initiate but also manage the water projects in the area. Majority of the respondents were married and thus likely to be more affected by the problem of water and to take steps to solve it and were also likely to manage the project effectively. Majority of them were farmers represented by 38%. This indicated that more of the respondents were farmers and housewives and water was important to them not for domestics but also for livestock and crops.

From the analysis of the findings, the project commenced in 2014 with an intention to provide the residents with sustainable water supply in the area. This was shown by the majority of 98% who agreed with this and the idea of Namelok Irrigation Water Association in collaboration with African Development Bank to support the residents get clean water for consumption. As indicated majority of the respondents (60%) joined the project with an intention to improve the farm yield and their livestock's to have enough water.

According to the analysis majority still indicated that the water had not been brought to their homesteads. This was shown by the representation of 70% who disagreed while 30% agreed and indicated that the water arrived 2 years after the completion of the project. Also noted is that as much as the water had not reached their homesteads the respondents agreed that the management of the projects was working out different was to ensure that all the residents had the water.

The findings also indicated where the water was available and this was shown by majority of 83% who indicate that yes the water is available for use by the residence on a daily basis for consumption. Seventeen percent felt that water was not that much available for they only get it rarely or on weekly basis when it is was opened for use for the circulation has not reached their areas.

5.2 Conclusions

At all levels participation of households is very important. The success of the project depends on the participation of its beneficiaries of the project for they are its key stakeholders of the project.

The study concluded that financial support for any project shall determine its success of failure based on the sufficient finance that it shall get. To achieve this, the source of the finance and donors should be involved on all stages of the project to achieve the project success.

The study found that a majority of the community members never participated in the initiation/start of the water projects. Thus, level of community participation in the water projects was low which affected the chances of its sustainability. During its implementation the household participated when they were consulted through a meeting, contribution of building materials and as leaders of the committees. The community members were involved in the water project through contribution of funds/other

resources and through designing and in management/running of the operations of the water projects. The community participation positively enhanced the sustainability of the water project to a great extent.

The study concluded that the management qualities that affected the sustainability of rural based water projects were technical expertise, managing resources, advising about technical architecture, knowledge of business, leadership, estimating project schedule and budget, ascertaining and managing risks and experience. The study concluded that those who managed the water project responded adequately to concerns whenever raised. The people appointed to manage the water project were effective.

5.3 Recommendations

5.3.1 Policy Recommendations

There is need for management to influence the stakeholders to participate in the projects that have been sponsored for them to see the outcomes of their investments. Also the level of community participation in project planning and implementation should be increased to enhance the sustainability of the water projects in the county. There is need for management of the project to review all the financial support to the project by giving all the updates on the financial position of this projects and should source for support from other sources too.

There is need for capacity building to be done through training of the stakeholders and the community members to improve on their capacity on management of the project. It was proposed that during initiation phase the management should give priority on capacity building programmes both to the beneficiaries as well as the management team.

5.3.2 Further Studies

Since this study was on the effects of community participation on the performance of water resources, there is need for similar study to be done in other counties for comparison purposes and to allow for generalization of findings on the effects community participation on the performance of water resources. The other studies should be conducted on the challenges facing community participation on the performance of water resources and on the role of women in enhancing the community participation on performance of water resources.

REFERENCES

- Arriens, W. and Alejandiro, A. (2003). *Doing Things Better: Effective Development and Management of Water Resources Require the Consultation and Participation of all Stakeholders* - With Government Leading the Way, Asian Foundation Bank.
- Athi Water (2014). *Environmental Impact Assessment Report for Proposed Borehole Drilling, at Namelok Area of Mashuru District, Kajiado County*. Republic of Kenya.
- Berk, R., (2009). Generalizability of Behavioral Observations: A Clarification of Inter-observer Agreement and Inter-observer Reliability. *American Journal of Mental Deficiency*, 83,(5): 460-472.
- Black. K (2004). *Business Statistics for Contemporary Decision Making*, Fourth E.d (Wiley Student Edition for India. Ed). Wiley-India. ISBN 978-81-265-0809-9.
- Bruns, B. (2008). *Community Priorities for Water Rights: Some Conjectures on Assumptions, Principles and Programmes*. Populations, *Waterlines Journal* 26(1):2–4.
- Day, J (2009). Community-Based Water Resources Management, *Journal of Waterlines*. 28 No.1.
- Eshum, F. (2008). *Community Participation in the Management of Forest Resource, As a means to Reduce Poverty for Sustainable Development in Kakum National Park*, Unpublished dissertation MPhil in Development Geography Oslo University: Norway.
- EUWI (2012). *Financing of Water Resources Management, Experiences From Sub-Saharan Africa*. Interim Report May 2012, EU Water Initiative, Finance Group.

- FAO (2003). *Participatory Development: Guidelines on Beneficiary Participation in Agricultural and Rural Development for the Rural Institutions Participation Service*, Rural Development Division (2nd edition). Rome Food and Agriculture Organization of the United Nations Italy
- FAO (2003). *Participatory Development: Guidelines on Beneficiary Participation in Agricultural and Rural Development for the Rural Institutions Participation Service, Rural Development Division (2nd edition)*. Food and Agriculture Organization of the United Nations Rome Italy Gebremedhin, Y. (2004). Thesis on Community Participation and Sustainable Soil and Water Conservation Management the Case of Zala-Daget Project: Dogu'aTembienWoreda –Tigray Highlands.
- Gathagu, T, W and Agwata, J, F (2014). Policy Options For Enhancing Women's Participation In Managing Water Resources In Kajiado County, *International Journal Of Development Research*,. 4(5): 1048-1055.
- Gebremedhin, Y. (2004). *Thesis on Community Participation and Sustainable Soil and Water Conservation Management the Case of Zala-Daget Project: Dogu'aTembienWoreda –Tigray Highlands* 62
- Hering, J. and Ingold, K. (2012). Water Management - Water Resources Management: What Should Be Integrated? *Science Journal*, 336 (68), 1234-1235.
- Interiwnational Water Management Institute (IWMI) (2009). *Guidelines For Community-Driven Water Resource Management, As Initiated By The Integrated Water Resource Management Demonstration Projects In Malawi, Mozambique, Namibia, Swaziland And Zambia*. Regional Water Sector Programme, Programme Support Facility, A SADC Initiative Funded By Danida
- Kariuki J. W. (2014). Tanathi, Environmental Impact Assessment Report, the Namelok Water Project. Nairobi – Kenya.

- Reid, N. (2000). *Community Participation: How People Power Brings Sustainable Benefits to Communities*, USDA Rural Development Office of Community Development.
- Sayer, J., Campbell, B. (2004). *The Science of Sustainable Development: Local Livelihood and Global Environment*. Cambridge Press Syndicate of the University of Cambridge.
- UN Water Report (2012). *Water Resources Management*. Status Report On Application of Water Resources Management, February 21. Supply Projects.
- United Nations Educational, Scientific and Cultural Organization - World, (2017). *United Nations Millennium Declaration (A/55/L.2)*. (Online) Available At: [Http://Www.Un.Org/Millennium/Declaration/Ares552e.Htm](http://www.un.org/millennium/declaration/Ares552e.htm). Last Visited December, 2017.

APPENDICES

APPENDIX I: LETTER FROM THE UNIVERSITY OF NAIROBI



UNIVERSITY OF NAIROBI
DEPARTMENT OF SOCIOLOGY & SOCIAL WORK

Fax 254-2-245566
Telex 22095 Varsity Nairobi Kenya
Tel. 318262/5 Ext. 28167

P.O. Box 30197
Nairobi
Kenya

August 28, 2019

TO WHOM IT MAY CONCERN

TAPATAYIAN N. CAROLYNE - C50/77309/2015

Through this letter, I wish to confirm that the above named is a bonafide postgraduate student in the Department of Sociology & Social Work, University of Nairobi. She has presented her project proposal entitled; **"The effects of community participation on the performance of water resources: A Case study of Namelok water project in Kajiado County, Kenya."**

Tapatayian is required to collect data pertaining to the research problem from the selected organization to enable her complete her project paper which is a requirement of the Masters degree.

Kindly give her any assistance she may need.

Thank you.

A handwritten signature in black ink, appearing to be 'C. I. K. Nzioka', written over the typed name.

Prof.C.I.K. Nzioka
Chairman, Department of Sociology and Social Work

APPENDIX II: QUESTIONNAIRE FOR THE COMMUNITY MEMBERS

My name is Carolyne Naleku Tapatayia, I am an M. A student from the University of Nairobi. I am carrying out a research on the effect of community participation on the performance of water resources: a case study of Namelok water project in Kajiado County, Kenya. You have been selected as a respondent in this study. Kindly spare some time to talk to me.

The purpose of this questionnaire is to acquire relevant data to complete a research (Master’s project) which is for the award of Master of Arts Degree in Sociology and Community Development of the University of Nairobi. The findings will be used as per the primary purpose but not otherwise. All information that you will offer will be kept confidential. Your positive contribution will be highly appreciated.

Section A: Characteristics of the respondents

1. Gender: Male () Female ()
2. Age Bracket: Below 29 years (), 30-39 years (), 40-49 years (), 50 -59 years (), over 60 years ().
3. Marital Status: Single (), Married (), widowed (), Separate/Separated (), any other.....
4. Education level: None (), Primary education (), Secondary education () Diploma/University ()
5. Occupation of the heads of households:
Paid employment.....
Self-employment....., Farmer (), housewife (),
Any other.....
6. Family Setup: Monogamous (), Polygamous (), others.....
7. Number of Children: None (), 1 – 3 (), 4 – 6 (), 7 – 9 (), Above 10()
8. Has other dependents: Yes () No ()
9. Length of Residence in the Community: Less than 4 year (), 5– 9years (), 10 –19years (),Above 20 years

Section B: Community Participation

- 10. Which year was this project started?
- 11. Why was it started?
- 12. Who were its initiators?
- 13. Which year did you join the project?
- 14. Why did you join the project?
- 15. What contributions did you make when joining the project?
- 16. Since joining, in which ways have you participated in the project?
- 17. Have you served as a Leader? Yes () No ()
 - a. If yes, when were you chosen? Year () Month ()
 - b. What position were you chosen to?
 - c. What are your duties and responsibilities?
 - d. Were you as a leader involved in making decisions? Yes () No ()
If yes, Like which decision
- 18. Which year was this project completed?.....
- 19. What are/were some of the major achievements and problems in the project during your leadership?

(a) Achievements

.....

.....

.....

.....

(b) Problems

.....

.....

.....

.....

20. In which ways did you and your family contribute towards the construction of Namelok water project?

Money (in Kshs)

Material (Approximate value in Kshs)

Others Specify

Section C: Level of Capacity Building on Namelok Water Project

23. What position do you hold in the project? Leader () Member ()

24. Has the project helped to improve your know how and skills? Yes () No ()

If yes, which of the following sources of information organized by the project have you attended?

	Yes	No	Type of information/skills learnt	How used
Community Meetings				
Leaflets				
Visit to your homesteads by project leaders				
Workshops				
Educational Trips				

25. Is the water readily available? Yes () No ()

If yes, Daily () Weekly () Fortnightly () Rarely()

If water is available fortnightly and rarely, why?

SECTION D: Perception of Performance of the Project

26. What is your Perception on Performance of the Project?

Very good () Good () Fair () Poor ()

Very Poor ()

If fair, poor and very poor, why?

.....

.....

.....

27. What could be done to improve its performance?

.....
.....
.....

SECTION Benefits of the Project

21. a. Now that the project is working, has water been brought into your homestead

a. Yes () No ()

b. If yes, when was it brought? Year () Month ()

c. If water has been brought to your home, how much did you pay for connection fee and meter (Kshs).

d. How much do you pay for the water every month? (Kshs).....

e. What other payments do you make for the water?.....

f. In which ways does your household use the water?

Human Consumption ()

Livestock ()

Other (Specify)

22. a). If water has not been brought to your home, why?

b). Is your household able to access the water at a communal tap?

Yes () No ()

c). How far is the tap from your homestead (Kilometers)

Thank You for Cooperation.

APPENDIX III: KEY INFORMANTS INTERVIEW SCHEDULE

My name is Carolyn Naleku Tapatayia, I am an M.A student from the University of Nairobi. I am carrying out a research on ‘community participation on the performance of water resources in Kajiado County, Kenya. You have been selected as a respondent in this study. Kindly spare some time to talk to me.

The purpose of this key informant’s interview schedule is to acquire relevant data to complete a research (Master’s project) which is for the award of Master of Arts Degree in Sociology and Community Development of the University of Nairobi. The findings will be used as per the primary purpose but not otherwise. All information that you will offer will be kept confidential. Your positive contribution will be highly appreciated.

- 1. Kindly give me the brief history of the project

.....
.....
.....

- 2. What are the goals/objectives of the project?

.....
.....
.....

- 3. Community participation

.....
.....
.....

- 4. Benefits of the project

.....
.....
.....

5. Performance of the project

.....
.....
.....

6. What are your perceptions of the performance of the project

Very good () Good () Fair () Poor ()
Very Poor ()

If fair, poor and very poor, why?

.....
.....
.....
.....

7. What could be done to improve its performance

.....
.....
.....

APPENDIX IV: CHECKLIST OF QUESTIONS ON THE PROJECT

My name is Carolyne Naleku Tapatayia, I am an M.A student from the University of Nairobi. I am carrying out a research on ‘community participation on the performance of water resources in Kajiado County, Kenya. You have been selected as a respondent in this study. Kindly spare some time to talk to me.

The purpose of this checklists to acquire relevant data to complete a research (Master’s project) which is for the award of Master of Arts Degree in Sociology and Community Development of the University of Nairobi. The findings will be used as per the primary purpose but not otherwise. All information that you will offer will be kept confidential. Your positive contribution will be highly appreciated.

- i. Which year was the project:
Initiated
Who were the initiators?
- ii. Sponsor.....
- iii. Goals/Objectives.....
- iv. When was the project completed
- v. What is the capacity of the project (e.g. volume of water per day)
- vi. Number of participating households
- vii. Number of facilities/institutions connected: Schools () Health Centers () Markets () Others (Specify)
- viii. Conditions for participation
- ix. Water charges
- x. Caretakers:
Number
- Training
- Monthly payment
- Sources of payments
- xi. Other beneficiaries
- xii. Who are the sponsoring agencies of the project?

- xiii. What is the amount of sponsorship (Kshs)
- xiv. Composition of project management committee
- xv. How is the committee chosen?
- xvi. When was the committee last chosen?
- xvii. What is the capacity building of members/leaders
- xviii. What is the Geographical area size of the project
- xix. Number of beneficiary households
- xx. Other beneficiaries: School ()Hospital Facilities ()
Business/market centers ()
- xxi. How is the governance of the project in terms of :
 - Type and number of meetings held this year
 - AGM
 - Committee meetings
 - Records kept
 - Budget
 - Auditing
 - Minutes of meetings
 - Visitors book.....
- xxii. Community participation
.....
.....
- xxiii. Benefits of the project
.....
.....
- xxiv. Performance of the project
.....
.....

xxv. What are your perceptions of the performance of the project

Very good () Good () Fair () Poor ()

Very Poor ()

If fair, poor and very poor, why?

.....

.....

xxvi. What could be done to improve its performance

.....

.....