INFLUENCE OF COMMUNITY PARTICIPATION ON THE PERFORMANCE OF KISERIAN DAM WATER PROJECT, KAJIADO COUNTY, KENYA.

FAITH MUGURE MUKUNGA

A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN PROJECT PLANNING AND MANAGEMENT, UNIVERSITY OF NAIROBI.

2012

DECLARATION

This research project report is my original work and has not been presented for examination in any University or any other institution of higher learning.

..... 26/11/2012

FAITH MUGURE MUKUNGA **Date**

L50/64431/2010

This research project report has been submitted for examination with my approval as the University supervisor.

..... 27/11/2012

Date

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DEDICATION

I dedicate this research project report to my beloved parents Mr and Mrs. Mukunga for their love, prayers and moral support in making my dream a reality and to my fiancée Peter Chege for his unwavering support, love and encouragement throughout the research process.

ACKNOWLEDGEMENT

My appreciation goes to the University of Nairobi, for giving me an opportunity to advance my career.

My utter most gratitude goes to my supervisor Dr. Lilian Omutoko who believed in my capability to undertake this research. Your constructive criticisms, recommendations and suggestions throughout the research process made this study a reality.

I wish to acknowledge my lecturers in the Department of Extra Mural Studies who sharpened my knowledge on Project Management issues in class sessions.

I am also sincerely grateful to Mr. Silas Muketha and Eng. Nicolas Kandie of National Water Conservation and Pipeline Corporation who provided information on the Kiserian Dam water project and for their positive criticisms of my research.

In addition, I wish to acknowledge Mr. Arthur Mwaura for his invaluable input especially in the research proposal conceptualization stage. Your positive remarks helped me to have a clear focus of my research.

Last but not least I wish to acknowledge my class colleagues and friends with whom i discussed several matters regarding my research. Your encouragement, constructive and sharp criticisms always kept me on guard.

TABLE OF CONTENT

Page

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

CD	Community Development
CP	Community Participation
EIA	Environmental Impact Assessment
EAP	East Asia and the Pacific
FGD's	Focus Group Discussions
NGO	Non-Governmental Organization
NWCPC	National Water Conservation and Pipeline Corporation
O and M	Operation and Maintenance
PMI	Project Management Institute
SPSS	Statistical Package for Social Scientists
SSA	Sub-Saharan Africa
UN	United Nations
UNICEF	United Nations International Children Education Fund
USAID	United States Agency for International Development
WASH	Water and Sanitation for Health Project
WB	World Bank
WC	Water Committees
WHO	World Health Organization

ABSTRACT

In Kenya, ineffectiveness of project planning and management approaches have been the main impediments in improving water access in rural areas. The study is guided by the following objectives; i)To investigate how community participation in the identification of kiserian Dam water project influenced its performance ii)To examine how community participation in the planning of kiserian Dam water project influenced its performance iii) To assess how community participation in the implementation of kiserian Dam water project influenced its performance iv) To establish how community participation in monitoring and evaluation of kiserian dam water project influenced its performance. The study will inform policy makers and project managers of water projects to improve planning and implementation towards the goal of sustaining project benefits. Literature reviewed revealed that community participation influences project performance. The research incorporated descriptive design which enabled the researcher to collect both qualitative and quantitative data. The study focused on households as key stakeholders of water projects. Multi-stage Cluster sampling and purposive sampling techniques were employed to select the respondents for the study who comprised of household heads, government officials, area chief, project managers and the community leaders. Interview schedules, questionnaires, focus group discussions and reference books were used to collect data. The data was analyzed using descriptive statistics to generate mean, frequency tables and percentages. The research revealed a low level of community participation in the development of Kiserian Dam project. The overall level of community involvement demonstrated on a 5-range Likert Scale an average measure of 2.3 in their actual involvement and participation in Identification, Planning, Implementation and Monitoring of the Kiserian Dam project. The study recommends that implementing agencies of development projects must accept the challenge for project sustainability and actively engage the community in all the stages of project development. This study proposes that a suitable enabling institutional environment needs to be created to ensure sustainability of development projects. This would require government commitment and accountability of the implementing agencies to the local communities.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Water management is concerned with the planning, design, implementation, and maintenance of a water project or Program to ensure that water, as a resource is efficiently and effectively used by the community. Water management involves the participatory approach of empowering communities to provide, protect and safeguard their own water sources (Vijita, 1996).

According to data provided by UNICEF and WHO, only 62% of the African population has access to improved water supply, with the worst conditions existing for rural populations who only have 47% coverage. Sanitation coverage is also very low compared to other regions, with only 60% of the population with improved sanitation. Again, the situation is poorer for rural populations, with only 45% coverage. Private connections for water in urban SSA remain very low with only 2-7 connections per 100 people.

There is a long history of community-based forms of development. Clearly significant were the cooperative movement and Gandhian notions of village self-reliance and small-scale development, which Gandhi saw as an antidote to the corrosive effects of modernization and colonial rule (Gandhi, 1962). Another influential perspective was that of Paulo Freire (1970), whose *pedagogy of the oppressed* argues that the 'oppressed' needed to unite to find a way to improve their own destinies. These ideas led to the first wave of participatory development in the 1950s, which by 1960 had spread to more than 60 countries in Africa, Asia and Latin America (White, 1999).

Until recently, the State was the major and sole player in the management of water resources. The results of this centralized control were largely a catalogue of failures - unrepaired, rundown water systems and wasted funds.

This led to a revision of the system to a participatory approach of empowering communities to manage their own water resources equitably and sustainably. While the state plays a critical supportive, supervisory and regulatory role, the civil society mobilizes, sensitizes and trains the community to manage water projects.

This community based system of water management evolved in the 1980's as a response to the international crisis of water scarcity and dwindling resources (Green, 1994). Water management that embraces a participatory approach empowers communities to provide, protect and safeguard their own water resources (Vijita, 1996). In this regard water management would be concerned with the community's involvement in the planning, design, implementation, and maintenance of a water project or program in order to ensure successful completion of projects and that water, as a resource is efficiently and effectively used by the community itself.

Most development project donors operating in developing countries have identified community participation as one of the prerequisites for the improved performance of the water sector. This is because it soon turned out that sustainable water supply and sanitation could not be achieved without involving the community not just in manual work, but also in the planning of programmes and the selection of technology (Therkildsen, 1988). Many projects therefore started by involving the community members in trench digging, system maintenance and in water committees.

The Kiserian Dam Water Project had been in existence for 24 years at the time of the study. The main design components of the project include; a spillway, pump, an overhead water tank, a water treatment plant and a site office. Planning of the Dam started in the late 1980's and construction started in the early 1990's.Construction of the Dam was then abandoned due to lack of funds and restarted again in 2009. The project was scheduled to be completed by January 2011.The purpose of this study is to examine the influence of community participation on the performance of Kiserian Dam Water Project.

1.2 Statement of the Problem

In Kenya, the problem of stalled and rundown water projects is common especially in the rural areas. This is exacerbated by the local community's inadequate participation in the development of water projects. This results in inadequate performance of water projects as well as diminished usefulness to beneficiary communities (Zainunisha Khan, 2005).

Ali *et al* (1983) found that people's participation is the basic tool for achieving national goals of development. In order to implement governmental policies in right perspectives, the people, who are the real clients of the governmental operations, are to be involved at all stages of development intervention. But because of bureaucratic preponderance and distrust by the successive governments to the people, people's participation in a large scale in local development process remains beyond the reach of the ordinary people.

Shrimpton (1989) states that community participation in all the phases of project development greatly enhances the likelihood of project success due to improved performance and increased sustainability. The development process should therefore be participatory and it should avail to the community an opportunity to be involved in the various stages of project development from project conceptualization, planning and implementation to project Monitoring and Evaluation. The study seeks to examine the influence of community participation on the performance of Kiserian Dam Water Project.

1.3 Purpose of the Study

The purpose of the study was to examine the influence of community participation on the performance of Kiserian Dam Water Project.

1.4 Research Objectives

The study was guided by the following objectives;

1.4.1 Main Objective

The main objective of this study was to examine the influence of community participation on the performance of Kiserian Dam Water Project.

1.4.2 Specific Objectives

i. To investigate how community participation in the identification of Kiserian Dam water project influenced its performance.
ii. To examine how community participation in the planning of Kiserian Dam water project influenced its performance.
iii. To assess how community participation in the implementation of Kiserian Dam water project influenced its performance.
iv. To establish how Community Participation in monitoring and evaluation of Kiserian Dam Water Project influenced its performance.

1.5. Research Questions

i. How did community participation in the identification of Kiserian Dam water project influence its performance?
ii. How did community participation in the planning of Kiserian Dam water project influence its performance?
iii. How did community participation in the implementation of Kiserian Dam water project influence its performance?
iv. How did community participation in the Monitoring and Evaluation of Kiserian Dam water project influence its performance?

1.6 Significance of the Study

The study will inform policy makers and empower project managers to improve planning and implementation towards the goal of sustaining project benefits.

Some of the benefits that may accrue to the community include; community empowerment, health benefits, strengthened local organizations and social-economic benefits. According to worldwide evidence from Water Supply and Sanitation (WS&S) projects, health benefits will accrue to individuals, especially those living in substandard environments, if their behaviors result in increased quantities of clean water being consumed and used for hygienic purposes and if they are protected from exposure to unsanitary wastes (Okun, 1987).

Community participation in all the various stages of project development will ensure that the communities own the projects and that their needs are met. It can also be used by donors to assess the sustainability of water projects before implementation. Donors will be willing to fund a project that has involved the target communities as this will ensure sustainability of the project even after the funding period has expired.

1.7 Scope of the Study

The study was carried out in Naserian sub-location in Kiserian location. This is one of the three sub-locations in Kiserian location situated in Kajiado County.

1.8 Limitations of the Study

Kiserian Dam is located in a rural setting on the slopes of Ngong Hills. One of the limitations of the study was in the access to the sample population located in the remote areas of Naserian Sub- location. Some of the households in the study area were not connected to a good road network and accessing them was a major challenge during field work.

The other limitation of the study was the absence of household heads during administration of the household questionnaire. To counter this challenge, the researcher left behind the questionnaires which were collected after one week with the help of the community leaders.

1.9 Assumption of the Study

The researcher assumed that the respondents were honest during the study.

1.10 Operational Definitions of Key Terms

Community participation- The involvement of the beneficiary community in making and implementation of decisions in the various stages of project implementation which include; identification, planning, implementation and Monitoring and Evaluation activities.

Community- People living in one place, district or county considered as a whole, with a shared interest, having things in common or being alike in some way.

Development- The act of developing or disclosing that which is unknown; a gradual unfolding process by which anything is developed, as a plan or method, gradual advancement or growth through a series of progressive changes.

Sustainability- The ability of project beneficiaries to maintain and sustain project activities, services and any measure initiated by a project so as to last long after the expiry of the funding period.

Stakeholder- Project stakeholders are individuals and organizations who are actively involved in the project or whose interests may be positively or negatively affected as a result of project execution or successful project completion.

Performance- Performance of a project is the evaluation of success with regards to conformance to preset standards/specifications during the execution of project activities.

1.11 Organization of the Study

The study is organized into five chapters. The introductory chapter gives a general synopsis of the research problem. It provides a background to the study as well as objectives and assumption of the study.

The second chapter provides a review of the literature which seeks to establish the relationship between community participation and performance of development projects in general. Chapter three examines the methodology that was used to collect and analyze data as well as a description of how the research variables were operationalized.

Chapter four presents the research findings from both qualitative and quantitative analysis. This is followed by a summary of the key findings, conclusions and recommendations of the study which are presented in chapter five.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a brief survey of the literature on the practice of community participation in development projects. It provides a conceptual understanding of community participation in development projects and how this influences project performance.

2.2 Community Participation Concepts

The two broad concepts of community participation include; participation 'as a means to an End' and Participation 'as an End'. Nelson and Wright (1995), argue that Participation "as a means to an end" implies the use of participation to achieve some pre-determined goals. It is a way of harnessing rural people's physical, economic and social resources to achieve the aims and objectives of development programmes and projects more efficiently, effectively or cheaply.

Participation as an end is viewed as an active, dynamic and genuine process which unfolds over time and whose purpose is to develop and strengthen the capabilities of rural people to intervene more directly in development initiatives (Cooke and Kothari, 2001).As an end, participation is seen as the empowerment of individuals and communities in terms of acquiring skills, knowledge and experience, leading to greater self-reliance (Burkey, 1993; Karl, 2000). The proponents of this view often maintain that development for the benefit of the poor cannot occur unless the poor themselves control the process, the praxis of participation.

It is argued that by establishing a process of genuine participation, development will occur as a direct result (Burkey, 1993; Cooke and Kothari, 2001). Table 2.1 below provides a comparative analysis which summarises the differences between these two concepts.

Table 2.1: Comparative Analysis between Participation as a means to an End Vs Participation as an End

Participation as Means to an End	Participation as an End
• It implies use of participation to achieve some predetermined goals or objectives.	• Attempts to empower people to participate more meaningfully.
• It is an attempt to utilise the existing resources in order to achieve the objectives of programmes/projects.	• The attempt is to ensure the increased role of people in development initiatives.
• The stress is on achieving the objective and not so much on the act of participation itself.	• The focus is on improving the ability of the people to participate rather than just in achieving the predetermined objectives of the project.
• It is more common in government programmes, where the main concern is to mobilise the community and involve them in improving of the delivery system.	• This view finds relatively less favour with the government agencies. NGOs in principle agree with this viewpoint.
• Participation is generally short term.	• Viewed as a long term process.
• Appears to be a passive form of participation.	• Relatively more active and long term.

Source: Adapted from Kumar (2002).

However, the distinctions between these concepts are neither clear-cut nor mutually exclusive. They represent different purposes and approaches to promoting participatory development. While many development agencies give equal weight to both, some emphasise on one or the other. Burkey (1993) for example, observes that until recently the notion of 'participation as a 'means' dominated development practice.

Although he concedes that some economic development was achieved as a result of this strategy, he also argues that, only a few development projects achieved meaningful participation and benefits by this means. In his view, this strategy has not resulted in meaningful participation of the poor. Nelson and Wright (1995) believe that the extent of empowerment and achievement of the local population is more limited in 'participation as a means' than it is in 'participation as an end'.

2.3 Project Development Cycle

A development project sets out to meet a perceived need by a sequence of activities, which includes identification, planning, implementation and monitoring and evaluation. The sequence has been adapted from Baum (1978). The stages and components of the project cycle and their logical sequences can be illustrated as shown in the figure below;

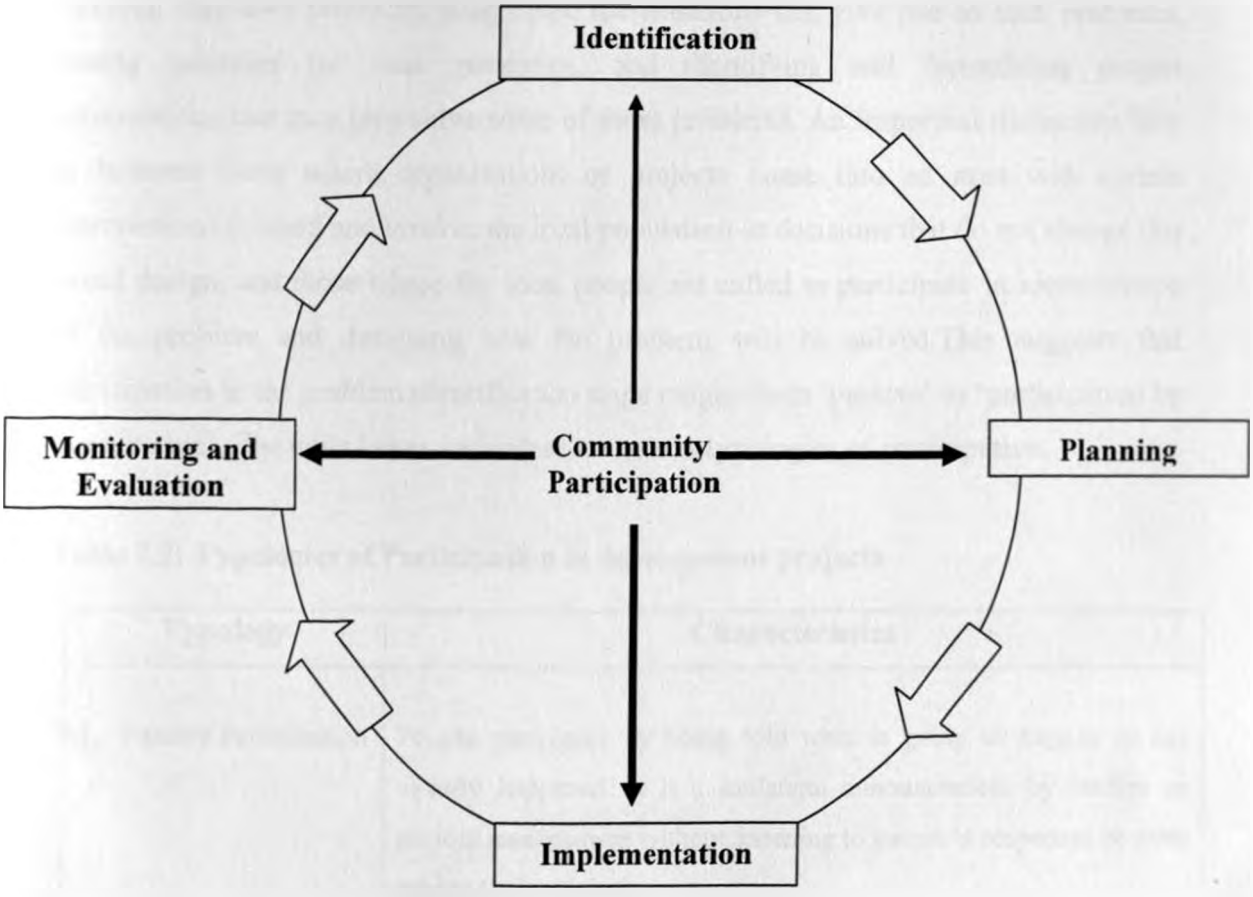

Figure 1: The project Cycle [Adapted from Baum (1978)]

2.4 Community Participation in identification of development projects and its influence on Project Performance

Identification of project ideas is very important to overcome problems or fulfill the development priorities in the context of local objectives. As the development projects affect the life of local people, local people's participation in this stage is necessary. It is the local people who knows the nature of their problem and knows the way of overcoming such problems. So project idea and possible solution must be emanated from initiatives by local people (Baum, 1978)

World Vision (2002) argues that, one of the crucial design principles in its programmes and projects is that local communities must play a key role in the identification of development activities. These include all efforts to involve the local population in defining their own problems, diagnosing the situations that give rise to such problems, setting priorities for their resolution, and identifying and formulating project interventions that may help solve some of those problems. An important distinction here is between cases where organizations or projects come into an area with certain interventions in mind and involve the local population in decisions that do not change this broad design, and those where the local people are called to participate in identification of the problem and designing how the problem will be solved.This suggests that participation in the problem identification stage ranges from 'passive' to 'participation by consultation'. The table below indicates the various typologies of participation.

Table 2.2: Typologies of Participation in development projects

Typology	Characteristics
1. Passive Participation	People participate by being told what is going to happen or has already happened. It is a unilateral announcement by leaders or project management without listening to people's responses or even asking their opinion.

2. Participation in Information Giving	People participate by answering questions posed by extractive researchers using questionnaire surveys or similar approaches. People do not have opportunity to influence proceedings, as the findings of the research are neither shared nor checked for accuracy.
3. Participation by Consultation	People participate by being consulted, and external people listen to views. These external professionals define both problems and solutions, and may modify these in light of people's responses. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board people's views.
4. Participation for Material Incentives	People participate by providing resources, for example labour, in return for food, cash or other material incentives. It is very common to see this called participation, yet people have no stake in prolonging activities when the incentives end.
5. Functional Participation	People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organisation. Such involvement does not tend to occur at the early stages of project cycles or planning, but rather after major decisions have been made. These institutions tend to be dependent on external initiators and facilitators, but may become self-dependent.
6. Interactive Participation	People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structured learning processes. These groups take control over local decisions, and so people have a stake in maintaining structures or practices.

7. Self-Mobilisation	People participate by taking initiatives independent of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Such self-initiated mobilisation and collective action may challenge existing inequitable distributions of wealth and power.

Source: Adapted from Pretty and Kumar (2002)

From the foregoing discussion, it is clear that there is a myriad of aspects of participation. This means that great care must be taken when using and interpreting the term. It should always be qualified by reference to the type of participation. In addition, observers seem to agree that the application of participatory approaches further calls for an appreciation of the social dynamics and diversities such as gender, age, social status, ethnicity, disability and power amongst others.

Projects usually cover vision development, planning process and implementation. Public participation may occur earlier and/or later in the process. However, it is recommended that participants are involved early in the process. Public Participation needs to take place when public/stakeholders' input can still make a difference in the design and/or a decision to implement a project.

It is important to start early when options are still available and parties are open to new suggestions because concerns can be accommodated in the plans (Inter-American Development Bank, 2000).In addition, controversial issues can be addressed before they become critical and eventually cause major conflicts thus influencing the performance of development projects (Connor, 2007).

2.5 Community Participation in Planning of development projects and its influence on Project Performance

The second phase at which local communities are supposed to take a direct and active part is during project planning. This suggests that participation in the planning and decision making processes could be described as 'representational participation' .Hickey and Mohan (2004) argue that, much of what is considered participatory in development projects and agencies is a process whereby large numbers of people are represented by a relatively small group of participants.

During consultation, relevant values and viewpoints can be gathered and it holds in particular for the values that cannot be measured in monetary terms such as restoration of aquatic systems, as well as cultural and social considerations that science failed to appreciate (Van Leussen 1996; Fischer, 2000). This need is reinforced by the fact that current problems and goals are not clearly defined and often a shared perception of the "true" nature of the problem does not exist (Pahl-Wostl, 2002).

Garin et al. (2002), while investigating public viewpoints in preparation of River Basin Management Plans (RBMP) in the Hérault watershed, in southern France, compared viewpoints of other stakeholders to those of the experts. They found that certain private concerns are not identified by the experts, the public does not see some problems cited by the experts and that experts and stakeholders' viewpoints can be opposed on the nature or origin of the problems and on their solutions and legitimacy. These can lead to opposition of stakeholders to the plans and thus to difficulty in implementation. Another example is in case of the Pea River watershed management in Alabama, USA. The watershed authority focused its activities almost entirely upon the issue of flood control, especially after the flooding of the city Elba in early 1990. However, a series of public hearings that took place after the 1990 flood revealed that other issues were of more concern to the citizens than flood control. Issues of greater concern were water supply, water quality, erosion, recreation, fish and wildlife. As a result, the authority conducted meetings during 1995-6 in which public input was obtained for use in the management plan.

The resulting plan identified the same issues and concerns in the watershed that were identified in the earlier public meetings (Mullen and Allison, 1999).

Similarly, Beierle and Konisky's (1999) findings reinforce the importance of incorporating public values into the planning process. These researchers evaluated cases of Public Participation in the Great Lakes region in North America. All their cases involved a wide variety of stakeholders that discussed and sometimes chose alternatives for improving environmental planning and water quality. The cases showed that value-oriented decisions can help define a common vision and priorities for action. Moreover, they found that in most of the cases (76% of 25 cases with good data) participants' preferences drove or changed decisions.

Thus, stakeholders were highly successful in shaping the final results. Similar results are found in a study into watershed planning initiatives in the USA. The results showed that Public Participation fostered a consensus on goals, thus increasing the legitimacy of the plans. The researchers concluded that integration of the various viewpoints is necessary to achieve successful long-term plans (Duram and Brown, 1999).

During consultation local data, information, knowledge and possible solutions from the public can be gathered. Given the levels of uncertainty that water resources managers face, many actions are selected without full knowledge of their consequences. A major source of uncertainty is lack of knowledge (Ostrom, 1990). Such knowledge can be accumulated by professionals but it can also be obtained based on local observation, or local knowledge. The latter applies to a wide range of issues, like farmers' familiarity with soils, or botanical knowledge of indigenous peoples. Although for some local knowledge appears 'primitive' and 'unscientific', it can be a valuable source of information and is increasingly recognized as a legitimate source of know-how and ideas for making decisions. In many ways, the local knowledge complements experts', especially when concerning unique local situations.

It can provide first-hand knowledge about local circumstances and assist in finding mistakes and solutions that satisfy a wider range of interests (Kickert et al., 1997; Pretty and Shah, 1997; Beierle and Konisky, 1999; Fischer, 2000).

In watershed management, conventional conservation programmes undertaken in the last century have been unsuccessful. Experience showed that programmes that are designed without local people are commonly rejected by them if external pressure (enforcement or economic incentives) is removed (Pretty and Shah, 1997). Hinchcliffe et al. (1995) have reviewed 22 case studies of participatory watershed development projects world-wide with regards to soil and water conservation. Local knowledge and skills were at the core of the programmes. Findings showed that despite cultural, political and other differences, all cases had common elements. All cases emphasized the need to use local knowledge and locally-adapted solutions. The impacts were positive including environmental, economic and social benefits. The benefits included recharge of aquifers, increased supply of drinking and irrigation water, reducing soil erosion, salinity and the use of fertilizers and pesticides. The authors stress that while these cases are only few and are still just "islands of success", they have proven to be very successful.

It is very important for construction projects to be completed on time, as the clients, users, stakeholders and the general public usually looks at project success from the macro view where their first criterion for project success appeared to be the completion time (Lim and Mohamed, 2000).Salter and Torbett (2003) and Odeh and Battaineh (2002) mentioned that time variance is one of the techniques for assessing project performance in construction projects. The element of time could indicate to project managers that the project was not running as smoothly as scheduled.

Furthermore, Latham Report in 1994 suggested that ensuring timely delivery of projects is one of the important needs of clients of the construction industry. Community participation can significantly reduce the time spent in executing project activities. When a project is accepted by the community, project activities run smoothly and according to schedule.

2.6 Community Participation in the Implementation of development projects and its influence on Project Performance

Implementation is perhaps the most vital stage of the project cycle involving the procurement of equipment and resources, recruitment of personnel and allocation of tasks and resources within the project organization. Under the project implementation plan, resources are mobilized, activities determined and control mechanism established so that the project inputs can produce project outputs in order to achieve the project purpose. Hence local people's participation at this stage is conducive to the successful operation of projects (Baum, 1978)

Some aspects of what Pretty (1995) calls 'functional participation' can also be seen at this stage especially where project implementation has involved formation of small interest groups such as women and youth income generation groups.Active involvement may foster raising public awareness to the problems that water managers face. It can also enhance adaptation of management practices. The process of raising public awareness addresses the need to increase public's understanding of the problems and the need for solutions. This is particularly important in cases which require behavior changes on the part of people because decisions made by the authorities without a learning process cannot be appreciated and followed.

Vice versa, the learning process raises awareness of contributions to the problems and willingness to control these problems. In addition, during discussions and deliberations participants have the opportunity to learn the value and rationale of new measures or arrangements (World bank, 1996).

In the study conducted by Beierle and Konisky (1999) on Public Participation in the Great Lakes region, it was found that educating people motivates them to recognize their contribution towards water pollution and take more responsibility for problems. It also motivates participants to become more involved in the decision making.

Similar conclusions resulted from the Duram and Brown (1999) research on watershed planning initiatives in the USA. The findings showed that the watershed initiatives led to public awareness about the need to protect the watersheds. This enhanced the desire to co-operate on problem solving.

Maarleveld and Dangbegnon (1999) argue that since the water system entails many unforeseen changes, continuous adaptation of water management is needed. Thus, when people learn how to assess the way they affect water resources, they also accept more control and contribute to resolve the problems. This, in turn, promotes adaptation of water management. Active involvement may result in defining shared-interests among the different stakeholders. Various stakeholders have different and often conflicting interests and viewpoints about problem solving. This is believed to be in the root of many environmental policy failures. Although deliberation cannot be expected to end controversies, it makes it possible to identify and develop shared interests and ideas for coordination of competing interests, hopefully leading to reaching common grounds (Termeer and Koppenjan, 1997; Fischer, 2000). Even if parties cannot resolve an issue, they can understand the goals and perspective of others by communication and building relationships.

Beierle and Konisky (1999) report similar findings, based on evaluation of cases of Public Participation in the Great Lakes region in North America. The researchers examined how well Public participation did in resolving conflicts among stakeholders. They found that in 58% (of the 19 cases with good data), the conflict between interests was declined. They also found that the process of communication, consensus-building and fairness was found more important than the content of the resolved conflicts because it provided opportunity to raise own issues and resolve differences. In addition, the researchers examined whether relationships or institutions were built during the process that would help resolve conflict arising in the future.

The findings showed that in 72% of the cases the process involved relationships among stakeholders or led to the development of procedures, or institutions for conflict resolution. In most of the cases participants indicated that even if disagreements or disputes persisted, the process improved relationships among stakeholders.

Many participants made efforts to bring the goodwill and cooperative relationships shaped during the process, into the creation of the joint arrangements. Most of the arrangements created continuous engagement of stakeholders, especially in the implementation phase. During active involvement participants perceive the process as fair and democratic because it enables them to be engaged in deliberations about decisions that need to be taken. Thus, the legitimacy of the process increases. A stream of ideas addresses the issues of fairness and democratic characteristics of the process. Fairness is considered an important element in people's satisfaction with decisions and support for authorities (Webler and Tuler, 2001).

It is argued, for example, that those who are affected and who would benefit from water must have the opportunity to participate in its planning and management because citizens should participate in decisions that affect their lives (Delli Priscoli, 2004). It also draws from the idea that the aim of democratic societies is to enable all citizens to participate as fully as possible in social, political and economic life (Benn, 1997) A participatory process allows participants to attend, contribute to the discussion, challenge and defend each other's claims, and finally decide or influence the outcomes. All these can restore trust in the decision making process.

There is no reason to confine concern with participation only to decision making and then to limit it further to influencing decisions rather than making them the working definition. Participating in implementation activities can give people bargaining power in decision making and more knowledge of what decisions are needed and appropriate. So it makes sense to be concerned with participation in both decision making and implementation. There is no need to take an either /or view. Also focusing on specific activities and outcomes to which indicators can be attached concentrates attention on who is

participating in what kinds of participation and how. Such distributive and qualitative concerns get lost when participation is identified with the abstract concept of process (Cohen and Uphoff, 1980).

2.7 Community Participation in Monitoring and Evaluation of development projects and its influence on Project Performance

The final stage in the project cycle is monitoring and evaluation, which is enhanced by follow-up action. Evaluation may be done by different people/stakeholders/ donors of the project to assess the performance of the project to see whether its stated objectives are achieved or not and to what extent (Baum, 1978).

Guijt and Gaventa (1998) explains that the idea of project Monitoring and Evaluation is to place the perspectives of local people, and particularly the poor, at the center of M&E activities. Project Monitoring & Evaluation involves local people, development agencies, and policy makers deciding together how progress should be measured, and results acted upon. It can reveal valuable lessons and improve accountability. By broadening involvement in identifying and analyzing change, a clearer picture can be gained of what is really happening on the ground. It allows people to celebrate successes, and learn from failures. For those involved, it can also be a very empowering process, since it puts them in charge, helps develop skills, and shows that their views count.

The same authors then identified four principles at the core of Project Monitoring and Evaluation: (i) participation to include those most directly affected (ii) negotiation to reach agreement about what, how and when to monitor, what the data actually means and what will be done with the findings of the monitoring (iii) learning for improvement and corrective action and (iv) flexibility to adjust to the various changes in the conditions under which the Monitoring and Evaluation exercise is carried out.

Information on who is participating in selected kinds of decisions in specified kinds of implementation activities in development projects can be included in the project management information system set up to monitor a project's progress. Such data can then be assessed in mid and end of project evaluations. This is pretty straightforward. The decisions and implementation activities that are to be monitored and evaluated should always be project specific, preferably determined in consultation with intended beneficiaries to be sure that these are meaningful decisions, activities and benefits (Cohen and Uphoff, 1977).As much as possible, joint monitoring and evaluation activities carried out with the involvement of both intended beneficiaries and project personnel, rather than by either group alone are desirable.

The goal of most development projects is to change behavior on the part of officials and local people. (Pelletier,1991) points out that in Tanzania, they have very good examples of programs in which joint Monitoring and Evaluation with primary responsibility resting with communities has had a very positive impact. Information gave impetus to both popular participation and bureaucratic reorientation. Government personnel started working more effectively once they came to know the real conditions at the village level through a systematic Monitoring and Evaluation system. Moreover, there was dramatic change in local people's collective and individual behavior once they knew with some precision and in comparative way over times and across jurisdictions how well they were meeting basic needs. While there were material constraints and vested interests to be overcome, these proved to be more malleable than expected once local people and officials both had the same Monitoring and Evaluation information collected in a way that gave everyone confidence in it and put its meaning in human terms.

For success in monitoring and evaluation programs, there should be continuity of personnel involved in the program both from the government side and from the donor agency (Narayan 1998).Having continuity of involvement from NGO's and from local communities is also important. There cannot be a very effective learning process without institutional memory to interpret observations and reflections.

It is desirable to have strong government support at high levels initially but this is not a prerequisite so long as there is acceptance of the idea of experimentation. For this to work, there should be a network of supportive, committed persons in a variety of key positions, bridging departmental and sectoral lines, who will give the program a boost when and if the need arises (Korten and Siy,1988).

A participatory approach should be conceived and implemented so that it is clearly in the interests of intended beneficiaries. Otherwise, incentives and group dynamics will defeat the effort. At the same time, participation is not simply a technical activity based only on self-interest. It is important to foster some sense of community and mutual interests in order for participation to be effective and sustained.(Hirschman,1984).consequently, participatory programs need to integrate normative and social orientations into their strategies and structures (Uphoff,1992).

2.8 Conceptual Framework

The conceptual framework shows the relationship between the dependent and independent variables and how they interact.The independent variables indicate the parameters that were measured and their influence on the dependent variable determined.

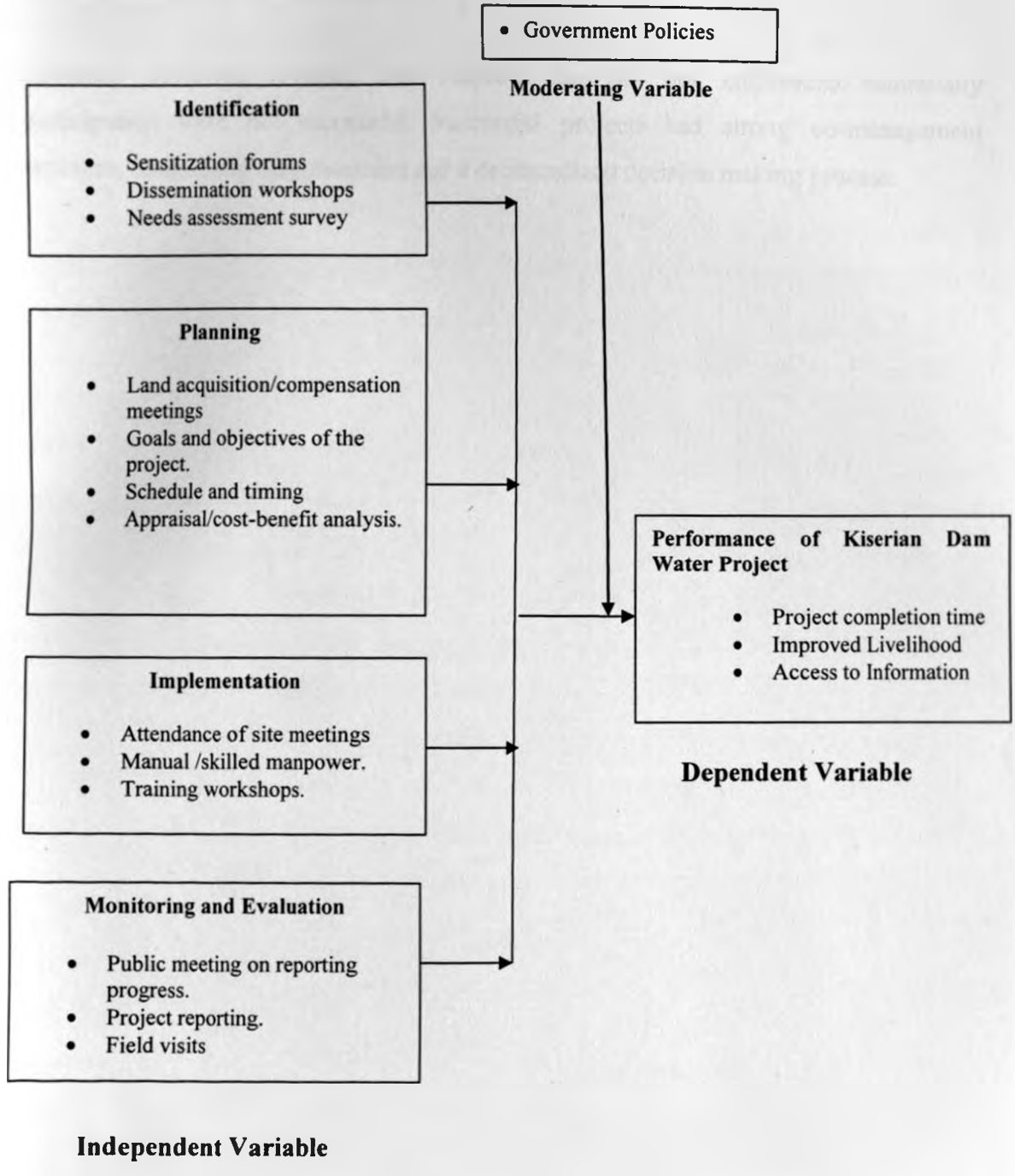

Figure 2: Conceptual Framework

2.9 Summary of Literature Review

Literature reviewed revealed that Projects that did not emphasize community participation were not successful. Successful projects had strong co-management structure, community empowerment and a decentralized decision making process.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on the steps that were adopted in carrying out the research. It outlines the research design, sampling procedure, methods of collecting and analyzing data as well as ethical considerations prior to data collection and operationalization of the research variables. The methodology helped the study to achieve the research objectives as well as answer the research questions.

3.2 Research Design

The study engaged quantitative and qualitative research paradigms.To examine the influence of community participation on the performance of Kiserian Dam water project, descriptive survey was employed. According to Mugenda (2003), a descriptive research determines and reports the way things are. It also attempts to describe such things as possible behavior, attitudes and characteristics. Descriptive survey research design enabled the study to generate statistical information on the influence of community participation on the performance of Kiserian Dam water project.

3.3 Study Area

The study was carried out in Naserian Sub-location which is located in Kiserian location of Kajiado County.

3.4 Target Population

The target population for the study included all the households that were to be connected with water supply from the Kiserian Dam. The Dam was proposed to supply water to approximately 250,000 people.

The accessible population included all the households in Naserian Sub-location of Kiserian Location. The total number of households in Naserian Sub-location is 4,058 (2009 census). It is from this population that the sample was drawn. The study also targeted key informants to the research, these included; the local administration in Kiserian (area chief and community leaders), NWCPC officials who were involved in the project and the project managers.

3.5 Sample Size

A total number of 356 subjects were selected for the study. The sample size was determined using the sample size determination table by Morgan (1990). The table provides desirable samples size for populations ranging from 10 to over 100,000 as shown in the table below.

Table 3.1: Sample Size Determination Table for a given Population

Population Size	Sample Size	Population size	Sample size	Population size	Sample size
10	10	100	80	4000	351
20	19	150	108	5000	307
30	28	200	132	10000	370
40	35	250	162	20000	377
50	44	300	169	50000	381
60	52	400	196	100000	382
70	59	1500	306		
80	66	2000	322		
90	73	3000	341		

Source: Morgan (1990)

The accessible population for the study is 4,058.The sample size was calculated based on Morgan's sample size determination table as shown below;

$$\frac{4{,}058 \times 351}{4{,}000}$$

$$= 356$$

A sample size of 356 subjects was selected to participate in the study.

3.6 Sampling Procedure

For purposes of this study, multi-stage cluster sampling and purposive sampling procedure was employed to determine the subjects of the study. According to Mugenda (2003), multi-stage cluster sampling is achieved when cluster sampling is done in two or more stages. The study started by randomly selecting Kiserian location from the three locations of Kajiado County which were to be supplied with water from Kiserian Dam. These include; Olchoro-Onyore, Olemelepo and Kiserian Location.Kiserian Location thus formed the first cluster in the sampling process.Naserian Sub-location was then randomly selected from the three sub-locations in Kiserian Location namely; Upper Matasia, Olteyani and Naserian. Naseian Sub-location thus formed the second cluster in the sampling process. It is from this cluster that the subjects of the study were randomly selected.

Purposive sampling was employed to select the key informants who included; NWCPC officials, Area chief and community leaders. Purposive sampling enabled the researcher to select subjects who had information on the extent to which the community was involved in the development of Kiserian Dam as well as performance of the Kiserian Dam project.

The following research instruments were used to collect data;

3.6.1 Questionnaires

Questionnaires were used to obtain data from the household heads in Naserian Sub-location. The household heads were chosen since they are the main decision makers at the household level. The data obtained helped to examine the influence of community participation on the performance of Kiserian Dam project.

3.6.2 Interview Schedule

Interviews were conducted with NWCPC officials to establish how they engaged the local community in the entire project delivery process and to find out whether the project had met the previously set goals and objectives during identification, planning, implementation and monitoring and evaluation stages. The officials were also interviewed on how they mobilized the community to participate.

3.6.3 Focus Group Discussions

Focus group discussions were held with the community leaders and the area chief. An open discussion was undertaken to establish whether the community was engaged to participate in the development of Kiserian Dam project and how this influenced its performance.

3.7 Pilot Study

A pilot study was carried out before the actual data collection. A sample of 20 questionnaires was administered to household heads in Maruba Dam area, Machakos County. The researcher selected this sample based on the similarities in characteristics to the actual sample. One of the similarities was the fact that the respondents in the selected sample were the main stakeholders' of the Maruba Dam project in Machakos County. This enabled the study to test the reliability of the instruments.Instruments found inadequate were modified thus enhancing reliability.

3.8 Validity of the Research Instruments

To ensure content-valid data, the researcher started by identifying the domain of indicators which were relevant to the variables of the study. According to Mugenda and Mugenda (2003), a content-valid measure should contain all possible items that should be used in measuring the concept of the study. The identified set of indicators was then discussed with the project supervisor and other experts to ensure that it accurately represents the concept of community participation and performance of water projects.

3.9 Reliability of the Research Instruments

To ensure reliability of the questionnaires, the test-retest method was employed. A sample of 20 questionnaires was administered randomly to household heads in Maruba Dam area in Machakos County. The researcher selected this sample based on the similarities in characteristics to the actual sample. One of the similarities was the fact that the respondents in the selected sample were the main stakeholders' of the Maruba Dam project in Machakos County. This allowed the study to make meaningful observations.

The same questionnaire was administered to the same subjects after one week. The scores from both tests were then correlated to determine the coefficient of reliability. This gave a coefficient of 0.6 which was found to be reliable for the study. According to Mugenda and Mugenda (2003), a reliability coefficient of 0.5 is acceptable in social science.

The coefficient of reliability was computed using the Karl Pearson's Product Moment Coefficient of Correlation (r).The items in the questionnaire were scored individually and aggregated to compute the total score. The coefficient of correlation was computed as follows;

$$r = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{\{n\sum x^2 - (\sum x)^2\}\{n\sum y^2 - (\sum y)^2\}}}$$

Where r= Reliability Coefficient

n = Number of respondents

$\sum xy$= Sum of the products of paired scores

$\sum x$= Sum of x Scores

$\sum y$= Sum of y Scores

$\sum x^{2}$= Sum of squared x Scores

$\sum y^{2}$= Sum of squared y Scores

$$r = \frac{(20\,(153177) - (1725)\,(1775)}{\sqrt{\{20(148971) - 1725^{2}\,(20\,(157633) - 1775^{2})\}}}$$

$$\frac{1665}{\sqrt{3795 \times 2035}}$$

$$r = 0.6$$

3.10 Data Collection Procedures

The study utilized both primary and secondary sources to collect data. Focus group discussions (FGD's), key informant interviews, household questionnaire and desk literature review methods were used to ensure triangulation and objective data analysis.

The researcher engaged two research assistants to assist in the administration of questionnaires to the household heads in the sample population. Focus Group discussions were then held with the area chief and the community leaders. The selected personnel of National Water Conservation and Pipeline Corporation were then contacted by the researcher via telephone for them to confirm the date when the interview would be conducted. All the data collected was stored in both hard and soft copies for analysis.

3.11 Data Analysis

The data was analyzed with a focus on the association between the independent variable (community participation) and the dependent variable (Performance of Kiserian Dam water project).

The data collected from household questionnaires was coded, cleaned and analyzed using descriptive statistics in order to generate mean, frequency tables and percentages. To examine the influence of community participation on the performance of Kiserian Dam water project, data collected from different sources such as household questionnaires, interview schedule, FGD's and desk review was inferred through triangulation of information.

Qualitative data obtained through in-depth interviews with the professionals, Focus Group discussions with community leaders and the local chief was organized according to categories and merged together with quantitative data from the household questionnaire to facilitate the writing and composition of the key findings. Analysis of the data enabled the researcher to interpret the information and draw conclusions and recommendations of the study.

3.12 Ethical Considerations

The researcher obtained consent from the National Council for Science and Technology. The respondents were informed on the purpose of the study, how they were expected to participate and how the study would affect them directly or indirectly. This enabled them to decide whether or not they were willing to volunteer information by filling the questionnaire. The researcher also acknowledged all sources of information from other scholars.

To comply with internationally accepted ethical standards, no names of individuals were recorded on the questionnaire. In this way, no individual was linked to a particular completed questionnaire thus assuring anonymity. No compensation was paid to any of the respondents for participating in the study.

The researcher endeavored to report the findings as accurately as possible and in turn disseminated the findings to the local community in Kiserian through the chief and NWCPC officials. This ensured that there was no deception in the research.

3.13 Operationalization of the Research Variables

This section identifies the indicators that were used to measure the research variables. The study is both qualitative and quantitative in nature. The relationship between the dependent and the independent variables was objectively analyzed using the identified indicators.

Table 3.2: Operationalization of Variables

Objective	Variables	Indicator(s)	Measurement	Scale	Data Collection Method	Data Analysis
To investigate how community participation in the identification of kiserian Dam water project influenced its performance.	Independent Variable -Identification Dependent Variable Performance of Kiserian Dam Water Project	-Sensitization forums -Dissemination workshops -Needs assessment survey -Project Time performance	-Number of community members who attended sensitization forums. -Number of community members who attended dissemination workshops. -Number of community members who participated in needs assessment survey. -Time variance in completion of project activities in the identification phase.	Ordinal	Questionnaire, FGD's,Interview guide.	Descriptive
To examine how community participation in the planning of kiserian Dam water project influenced its performance.	Independent Variable -Planning Dependent Variable -performance of kiserian Dam water project	-Land acquisition/compensation meetings -Goals and objectives of the project. -Project Schedule and timing -Appraisal/cost-benefit analysis. -Preparation and receiving of reports. -Achievement measuring and verification. -project Time Performance	-Number of community members who attended land acquisition meetings. -Number of community members who participated in setting project goals and objectives. -Number of community members who participated in scheduling of project activities and cost-benefit analysis. -Number of community members who participated in identifying the procedure for preparation and receiving of reports on project progress. -Number of community members who participated in identifying means of measuring project achievements. - Time variance in completion of project activities in the planning phase.	Ordinal	Interview guides, questionnaire, FGD's	Descriptive
To assess how community participation in the implementation of Kiserian Dam water project influenced its performance.	Independent Variable -Implementation Dependent Variable -performance of Kiserian Dam water project	-Attendance of site meetings -Manual /skilled manpower. -Training workshops. -Improved livelihood	-Number of community members who attended site meetings. -Number of community members who provided manpower. -Number of people who attended training workshops -Technical and management skills acquired. -Number of community members employed -Economic Benefits to the local community	Ordinal	Interview guide, FGD's and questionnaire	Descriptive

To establish how community participation in monitoring and evaluation of kiserian dam water project influenced its performance.	Independent Variable -Monitoring and Evaluation. Dependent Variable -Performance of Kiserian Dam water project	-Attendance of Public meetings on reporting progress. -Field visits -Access to information

-Number of community members who attended public meetings held on reporting project progress. -Number of community members who attended field visits -Number of community members who had access to progress reports,posters,pamphlets etc	Ordinal	Interview guides,Questionnaire,FGD's	Descriptive

To establish how community participation in monitoring and evaluation of kiserian dam water project influenced its performance.	Independent Variable -Monitoring and Evaluation. Dependent Variable -Performance of Kiserian Dam water project	-Attendance of Public meetings on reporting progress -Field visits -Access to information

-Number of community members who attended public meetings held on reporting project progress. -Number of community members who attended field visits -Number of community members who had access to progress reports,posters,pamphlets etc	Ordinal	Interview guides,Questionnaire,FGD's	Descriptive

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the findings which have been discussed according to the research objectives. The data was collected from household heads in Naserian Sub-location, area chief, community leaders and NWCPC personnel who were involved in the development of Kiserian Dam Project. The data was analyzed according to the research objectives which include; To investigate how community participation in the identification of kiserian Dam water project influenced its performance, To examine how community participation in the planning of kiserian Dam water project influenced its performance, To assess how community participation in the implementation of Kiserian Dam water project influenced its performance and lastly, To establish how community participation in monitoring and evaluation of Kiserian Dam water project influenced its performance. The analysis is presented using frequency tables, mean and percentages.

4.2 Questionnaire Response Rate

The researcher administered the questionnaires with the help of two research assistants. During field work, some of the household heads were not present during the administration of questionnaires. The questionnaires were therefore collected after one week with the help of community leaders. Out of the 356 questionnaires that were given to the household heads, 200 were received back.

This gives an overall response rate of about 56%. According to Mugenda. (2003) a response rate of 50% is adequate for analysis and reporting. It is further explained that if the non-respondents are not different, the researcher should assume that the sample of those who responded is representative enough.

4.3 Demographic Information

To understand the background of the respondents, the researcher required them to indicate their gender, how long they had lived in Kiserian and their level of education. The respondents were further required to indicate whether they were aware who had initiated the Kiserian Dam project and whether or not water was the most felt need amongst others.

4.3.1 Gender of the Respondents

The study looked into the gender of the respondents in order to establish whether gender had any influence on participation in the various phases of the Kiserian Dam project development

Table 4.1: Gender of the Respondents

Gender	Frequency	Percent (%)
Male	69	34.5
Female	131	65.5
Total	**200**	**100**

The study revealed that majority of the respondents were female accounting for 65.5% with only 34.5% representing males. This may be due to the fact that majority of the males were at their places of work and not present in their homes at the time of the study.

4.3.2 Respondent's Duration of Stay in Naserian Sub-Location

The respondent's duration of stay may have had an impact on their participation in the various phases of the Kiserian Dam project. This is due to the fact that the Kiserian Dam project had been in existence for a period of 24years at the time of the study.

Therefore the respondents who participated in the early stages of project conceptualization and planning must have been staying in Naserian Sub-location at that time. The study looked into the duration of stay of the respondents with a view of establishing how this influenced participation in the various phases of Kiserian Dam project development.

Table 4.2: Respondent's Duration of Stay in Naserian Sub-Location

Duration of Stay	Frequency	Percent (%)
< 2years	19	9.5
3-8 years	40	20.0
9-14 years	26	13.0
15- 20 years	30	15.0
21-26 years	43	21.5
> 26 years	42	21.0
Total	**200**	**100**

The study revealed that majority of the respondents had lived in Kiserian for 21-26 years accounting for 21.5% of the respondents. This indicates that majority of the respondents were already living in Kiserian by the time the Kiserian Dam project was conceived.

4.3.3 Respondents' Level of Education

The study wanted to find out the level of education of the respondents. This information would help to find out whether the respondents had the required skills and expertise to be involved in the development of the Kiserian Dam project

Table 4.3: Respondent's Level of Education

Education Level	Frequency	Percent (%)
Primary	102	51.0
KCSE	66	33.0
A Level	2	1.0
Graduate	17	8.5
No Education	13	6.5
Total	**200**	**100.0**

The study revealed that majority of the respondents accounting for 51.0% had primary education with only 8.5% having acquired a university degree. This indicates that majority of the local community in Naserian Sub-location could not be engaged to provide professional expertise during implementation of the Kiserian Dam project.

4.3.4 Respondent's Awareness of the Kiserian Dam Project Initiator

The respondents were asked to state whether they were aware of the Kiserian Dam project initiator. This was in order to find out whether the local community was informed about the project since they are the main stakeholders.

Table 4.4: Awareness of Project Initiator

Awareness of Project Initiator	Frequency	Percent (100%)
Yes	81	40.5
No	119	59.5
Total	**200**	**100**

The study revealed that 59.5% of the respondents were not aware of the Kiserian Dam project initiator while 40.5% expressed awareness of the project initiator. This could be used to show that the local community was not adequately sensitized about the project during the initial stages of project conceptualization.

4.3.5 Community's Needs Ranking

The study wanted to determine whether water was the most felt need amongst others for the local community. This would help to justify the development of the Kiserian Dam project in the area and to determine whether a proper needs assessment was done by the project implementers.

Table 4.5: Community's Needs Ranking

Community Needs	Frequency	Percent
Sanitation	2	1.0
Farm inputs	2	1.0
Health	12	6.0
Education	15	7.5
Water	**159**	**79.5**
Security	2	1.0
Transport	8	4.0
Total	**200**	**100**

The study revealed that 79.5% of the respondents felt that water was the number one priority amongst other felt needs followed by Education and Health facilities at 7.5% and 6.0% respectively. Majority of the respondents indicated that water was most essential to them since they needed water for running their businesses, for performing household chores and for livestock. The above analysis indicates that the Kiserian Dam project was essential to the community.

4.4 Community Participation in the Identification of Kiserian Dam and its influence on Project Performance

The Respondents were required to indicate the activities that they participated in during the identification of the Kiserian Dam project. The study wanted to investigate how community participation in the identification of Kiserian Dam water project influenced its performance.

Table 4.6 Community Participation in the Identification of Kiserian Dam Project

Participation	Frequency	Percent (%)
Attending sensitization forums	30	15.0
Attending dissemination workshops.	4	2.0
Participation in needs assessment survey.	2	1.0
Did not Participate	164	82.0
Total	**200**	**100**

The study revealed that 82% of the respondents were not involved in any way during the identification of the Kiserian Dam project with only 1% having participated in the needs assessment survey. Majority of the respondents who did not participate indicated that they were not informed by the implementing agency on ways in which they could participate and hence they blamed their lack of participation on the fact that they were not engaged to participate. The above findings indicate a low level of participation on the part of the community during the initial stages of project identification.

The respondents were also required to indicate how long they participated during project identification stage.

Table 4.7: Duration of Participation in Project Identification Stage

Duration	Frequency	Percent (%)
< One Month	4	2
2-7 Months	5	2.5
8-13 Months	10	5
14-19 Months	15	7.5
>19 Months	2	1
No Participation	164	82
Total	**200**	**100**

The study revealed that 7.5% of the respondents had participated for approximately 14-19 months while 5% indicated that they participated for 8-13 months.

Interviews with NWCPC officials confirmed that the local community had been invited to attend sensitization meetings. However only a few people showed up and therefore the exercise did not reach the desired target. Focus Group Discussions with the area chief and community leaders also confirmed that the local community was reluctant to attend the sensitization meetings. This led to delays in completion of project identification activities which was scheduled to take 6 months. The study revealed that project identification activities took more than 1 year and 7 months indicating a time variance of about 1 year and 1month. This affected the time performance of Kiserian Dam water project with regards to delays in completion of project activities during the identification stage.

Connor (1997) explains that when stakeholders' input is incorporated early in the development of a project, controversial issues can be addressed before they become critical and eventually cause major conflicts.

4.5 Community Participation in the Planning of Kiserian Dam and its influence on Project Performance

The study wanted to examine how community participation in the planning of Kiserian Dam water project influenced its performance.

Table 4.8: Community Participation in the Planning of Kiserian Dam Project

Participation	Frequency	Percent (%)
Attending land acquisition meetings	38	19.0
Setting project goals and objectives.	10	5.0
Scheduling of project activities	20	10.0
means of measuring project achievements	7	3.5
Cost-benefit analysis	5	2.5
Did not Participate	120	60.0
Total	**200**	**100**

The study revealed that only 5% of the respondents participated in setting goals and objectives of the project. Majority of the respondents however did not participate in any way during the planning stage accounting for 60% of the respondents.

The respondents were also required to indicate how long they participated during the planning stage. The study wanted to determine whether project activities in the planning stage were completed according to the pre-determined time schedule. Project planning activities had been estimated to take approximately 1 year.

Table 4.9: Duration of Participation in the Planning Stage

Duration	Frequency	Percent (%)
< One Month	4	2
2-7 Months	7	3.5
8-13 Months	9	4.5
14-19 Months	10	5
>19 Months	50	25
No participation	120	60
Total	**200**	**100**

The study revealed that majority of the respondents accounting for 25% had participated in project planning activities for more than 19 months. This indicated a project time variance of 7 months in execution of planning activities.

Interviews with NWCPC officials revealed that there was no local expertise during Dam instrumentation period and this led to possible delays during the planning phase. This was due to the fact that a foreign company with the necessary expertise and technology had to be engaged to conduct tests and assure that the site was appropriate for dam construction.

The study also revealed that the implementing agency encountered hostility on the part of the community as they were reluctant to relocate even after they had been adequately compensated. Some of the landowners continued to farm around the Dam area thus encroaching into the Dam reserve. This resistance could be used to explain the time variance during execution of planning activities.

Literature reviewed indicated that public participation fosters a consensus on goals, thus increasing the legitimacy of the plans.Duram and Brown (1999) concluded that integration of the various viewpoints of the relevant stakeholders' is necessary to achieve successful long-term plans.

4.6 Community Participation in the Implementation of Kiserian Dam and its influence on Project Performance

The study wanted to assess how community participation in the implementation of Kiserian Dam water project influenced its performance.

Table 4.10: Community Participation in the Implementation of Kiserian Dam Project

Participation	Frequency	Percent (%)
Attending site meetings.	16	8.0
Providing manpower	4	2.0
Attending training workshops	8	4.0
Did not Participate	172	86.0
Total	**200**	**100**

An assessment of community participation in the implementation of the Kiserian Dam revealed that only 2% of the respondents participated by providing manpower during the implementation of the Kiserian Dam project.86% of the respondents did not participate in any way during the implementation phase while 8% of the respondents confirmed that they attended site meetings during the implementation period.

The study also wanted to find out whether participation in the implementation activities of Kiserian Dam project improved the livelihood of the community.

Table 4.11: Improved Livelihood to the Local Community during project implementation

Benefits	Frequency	Percent (%)
Job Creation	4	2.0
Economic Benefits	50	25.0
Technical Capacity/skills	12	6.0
No benefits	134	67.0
Total	**200**	**100**

Individual respondents were asked to state the various ways in which participation during the implementation phase influenced their livelihood.2 % of the respondents indicated that they had been employed to work at the construction site as casual workers, while 25 % of the respondents indicated that they had benefited economically through engaging in income generating activities. This was especially the case for the farmers who were practicing small scale farming around the Dam area. Other beneficiaries included IDP's who were undertaking quarrying activities within the Dam area as well as food vendors selling food to the construction workers. The implementation of Kiserian Dam project also had overall benefits to the local community through improved infrastructure. In order to access the project site, a new road was constructed. This improved greatly improved accessibity within the project area.

Focus Group Discussions with the area chief and community leaders revealed that the project contractor engaged more 'outsiders' than the local people to provide manpower during construction. This could explain the low level of community participation especially on providing manpower during the implementation phase of the project. Active Involvement of the community in the implementation process could have had various positive impacts on the community such as income generation, ownership of the project and understanding of the expectations of project quality performance.

Cohen and Uphoff (1980) explain that there is no reason to confine concern with participation only to decision making and then to limit it further to influencing decisions rather than making them the working definition. Participating in implementation activities can give people bargaining power in decision making and more knowledge of what decisions are needed and appropriate.

4.7 Community Participation in the Monitoring and Evaluation of Kiserian Dam and its influence on Project Performance

The study wanted to establish how community participation in monitoring and evaluation of Kiserian Dam water project influenced its performance. One of the project objectives was to report project progress to the local community periodically and to incorporate the local community's views in order to improve project performance.

Table 4.12: Community Participation in the Monitoring and Evaluation Stage

Participation	Frequency	Percent (%)
-Attending public meetings on reporting project progress.	22	11.0
-Access to information on project progress e.g posters and pamphlets.	8	4.0
-Participation by attending Field Visits	10	5.0
Did not Participate.	160	80.0
Total	**200**	**100**

The study revealed that 80% of the respondents did not participate in Monitoring and Evaluation activities while only 4% had access to progress reports and pamphlets on project progress reporting. Most of the information received by the respondents however was from the internet and on local broadcasting stations where progress on the Kiserian Dam was featured.

Cohen and Uphoff (1977) noted that the decisions and implementation activities that are to be monitored and evaluated should always be project specific, preferably determined in consultation with intended beneficiaries to be sure that these are meaningful decisions, activities and benefits.

The above analysis clearly indicates that majority of the local communities were not aware about project progress and that the implementing agency had poorly coordinated project reporting activities especially to the beneficiary community. The inadequate participation of the local community in monitoring and evaluation activities limited their participation in decision making about project progress. This influenced performance of the project in relation to the objective of reporting project progress to the beneficiary community.

4.8 Overall Community Participation and its Influence on Project Performance

An overall assessment of the extent of participation by the individual respondents was computed by assigning a value to their answers. The individual respondents were expected to indicate the number that best described their overall participation in all the stages of project development. The respondents stating that they had contributed 'very much' were awarded 5 points. 'Much' was awarded 4 points and the rest of the responses were awarded points in a descending order up to 1.

Table 4.13: Overall Community Participation in the Development of Kiserian Dam Project

Overall Participation	Score	Frequency	(x)	(Fx)	Percent
Never	1.00-1.99	123	1.495	183.885	61.5
Little	**2.00-2.99**	**29**	**2.495**	**72.355**	**14.5**
moderate	3.00-3.99	24	3.495	83.88	12.0
Much	4.00-4.99	12	4.495	53.94	6.0
very much	5.00-5.99	12	5.495	65.94	6.0
Total		**200**		**460**	**100.0**

Mean $\frac{\sum fx}{\sum f}$

$$\frac{183.885+72.355+83.88+53.94+65.94}{123+29+24+12+12}$$

$$=\frac{460}{200}$$

Mean Score =2.3

The study revealed that only 6% of the respondents had 'much' involvement in the project. The proportion of the respondents who considered their involvement was 'moderate' was 12 % while those who never participated in any way accounted for 61.5% of the respondents. The foregoing analysis reveals a weak participation level in all the stages of the Kiserian Dam project development with a mean score of 2.3 of a 5-range Likert scale. This could explain the inadequate performance of the Kiserian Dam project in the various phases of project development.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the research findings, discussions and conclusions of the study based on research objectives. It further presents recommendations as per the responses from the respondents. This is in relation to community participation in all the phases of project development which include; identification, planning, implementation and Monitoring and Evaluation. Finally, the chapter presents suggestions for further research in related fields.

5.2 Summary of Findings

The purpose of the study was to examine the influence of community participation on the performance of Kiserian Dam Water Project. The study area was Naserian Sub-location in Kiserian Location, Kajiado County.

5.2.1 Community Participation in the Identification of Kiserian Dam and its influence on project performance

The first objective of the study was to investigate how community participation in the identification of kiserian Dam water project influenced its performance. The analysis of the findings revealed that 82% of the respondents were not involved in any way during the identification of the Kiserian Dam project. Majority of the respondents who did not participate indicated that they were not informed by the implementing agency on ways in which they could participate and hence they blamed their lack of participation on the fact that they were not engaged to participate. The findings of the study further revealed that 15% of the respondents participated by attending sensitization forums while 1% participated in needs assessment survey.

Interviews with NWCPC officials confirmed that the local community had been invited to attend sensitization meetings. However only a few people showed up and therefore the exercise did not reach the desired target. Focus Group Discussions with the area chief and community leaders also confirmed that the local community was reluctant to attend the sensitization meetings. This led to delays in completion of project identification activities which was scheduled to take 6 months. The study revealed a time variance of 1 year and 1 month. This affected the time performance of Kiserian Dam water project with regards to delays in project activities.

5.2.2 Community Participation in the planning of Kiserian Dam and its influence on project performance

The second objective of the study was to examine how community participation in the planning of Kiserian Dam water project influenced its performance. The study revealed that only 5% of the respondents participated in setting goals and objectives of the project. Majority of the respondents however did not participate in any way during the planning stage accounting for 60% of the respondents.

Interviews with NWCPC officials revealed that there was no local expertise during Dam instrumentation period which led to possible delays in project completion. This was due to the fact that a foreign company with the necessary expertise and technology had to be engaged to conduct tests and assure that the site was appropriate for dam construction. This led to delays particularly in the planning stage with a time variance of about 7 months in execution of planning activities.

The study also revealed that the implementing agency encountered hostility from the community as they were reluctant to relocate even after they had been adequately compensated. Some of the landowners continued to farm around the Dam area thus encroaching into the Dam reserve.

5.2.3 Community Participation in the implementation of Kiserian Dam and its influence on project performance

The third objective of the study was to assess how community participation in the implementation of Kiserian Dam water project influenced its performance. The study revealed that only 2% of the respondents participated by providing manpower during the implementation of the Kiserian Dam project.86% of the respondents did not participate in any way during the implementation phase while 8% of the respondents confirmed that they attended site meetings during the implementation period.

Individual respondents were asked to state the various ways in which their participation in the implementation phase impacted on their livelihood.2% of the respondents indicated that they had been employed to work at the construction site as casual workers, while 25 % of the respondents indicated that they had benefited economically through engaging in income generating activities.

Focus Group Discussions with the area chief and community leaders also revealed that the project contractor engaged more 'outsiders' than the local people to provide manpower during construction. This could explain the low level of community participation especially on providing manpower during the implementation phase of the project.

5.2.4 Community Participation in Monitoring and Evaluation of Kiserian Dam Project and its influence of project performance

The last objective of the study was to establish how community participation in monitoring and evaluation of kiserian Dam water project influenced its performance. The study revealed that 80% of the respondents did not participate in Monitoring and Evaluation activities while only 4% had access to information and pamphlets on project progress reporting.

Most of the information received by the respondents however was from the internet and on local broadcasting stations where progress on the Kiserian Dam was featured. The study further revealed that 11% of the respondents had attended public meetings on reporting project progress while 5% participated by attending field visits where project progress was discussed.

For a project to be successful, the Project stakeholders' need to be given feedback on project progress and their opinions incorporated in decision making. The findings of the study show lack of accountability on the part of the implementing agency.

5.3 Discussion of Findings

5.3.1 Community Participation in the Identification of Kiserian Dam Project and its influence on project performance

The study observed that there was poor communication on the part of the implementing agency with regards to calling for meetings on needs assessment surveys and dissemination workshops. This indicates poor management of the Kiserian Dam project as well as poor coordination of project activities.

World Vision (2002) argues that, one of the crucial design principles in its programmes and projects is that local communities must play a key role in the identification of development activities. These include all efforts to involve the local population in defining their own problems, diagnosing the situations that give rise to such problems, setting priorities for their resolution, and identifying and formulating project interventions that may help solve some of those problems.

According to Mikkelson, (1995), Participation involves risks and costs as well as benefits. The emerging participatory development paradigm suggests substantive involvement of the local people in the selection, planning and implementation of programmes and projects that will affect them. In these way local perceptions, attitudes, values and knowledge are assuredly taken into account as fully and as early as possible. In this case, the local community should have been actively engaged in the initial stages of project development to ensure that any issues raised are addressed as early as possible.

5.3.2 Community Participation in the Planning of Kiserian Dam Project and its influence of project performance

The study observed poor coordination and management of project activities in the planning stage which led to delays during Dam instrumentation. The foreign expertise that was involved in the planning stage could have been contracted early enough to avoid delays in completion of the project. The element of time could indicate to project managers that the project was not running as smoothly as scheduled.

The study also revealed that the implementing agency encountered hostility from the community as they were reluctant to relocate even after they had been adequately compensated. Some of the landowners continued to farm around the Dam area thus encroaching into the Dam reserve. This boils down to the fact that the community was not adequately empowered and they did not own the project from the onset.

The philosophical-political foundation involves the belief that poor people should be empowered and should have more command over their lives (Chambers 1995); and that they should be empowered "to determine choices in life and to influence the direction of change" (Moser 1989). With 60% of the respondents not having been involved in the planning stage, this does not depict an empowered community and it gives a leeway for top-down decision making processes.

5.3.3 Community Participation in the Implementation of Kiserian Dam Project and its influence on project performance

The study observed that the local community did not have the required skills and expertise to be involved in professional work during the Kiserian Dam project development. However that not withstanding, they could still have participated in casual jobs. The respondents cited nepotism as the major reason why they were excluded from participating in implementation activities.

Pretty and Kumar (2002) explains that one typology of participation is participation for material incentive. This is where People participate by providing resources, for example labour, in return for food, cash or other material incentives. It is very common to see this kind of participation, yet people have no stake in prolonging activities when the incentives end. The local community in Kiserian could have been actively involved during implementation of the Kiserian Dam project not only to provide manpower but also their opinions should have been incorporated in decision making. Active Involvement of the community in the implementation process could have had various positive impacts on the community such as income generation, ownership of the project and understanding of the expectations of project quality performance.

Cohen and Uphoff (1980) further argue that there is no reason to confine concern with participation only to decision making and then to limit it further to influencing decisions rather than making them the working definition. Participating in implementation activities can give people the bargaining power in decision making and more knowledge of what decisions are needed and appropriate. It therefore makes sense to be concerned with participation in both decision making and implementation.

5.3.4 Community Participation in Monitoring and Evaluation of Kiserian Dam Project and its influence on project performance

It was observed from the study findings that there was lack of accountability on the part of the implementing agency. This was confirmed by the fact that the local community was not actively engaged in Monitoring and Evaluation activities. Guijt and Gaventa (1998) explains that the idea of project Monitoring and Evaluation is to place the perspectives of the local people and particularly the poor at the center of Monitoring and Evaluation activities. Project Monitoring & Evaluation involves local people, development agencies, and policy makers deciding together how progress should be measured and results acted upon. It can reveal valuable lessons and improve accountability. By broadening involvement in identifying and analyzing change, a clearer picture can be gained of what is really happening on the ground. It allows people to celebrate success and learn from failures. For those involved, it can also be a very empowering process, since it puts them in charge, helps develop skills, and shows that their views count.

Wilcox, (1994) cautions that, information giving and consultation are often presented as participation leading to disillusionment among community interests. From the study findings, it was clear that the local community was not actively engaged in decision making during Monitoring and Evaluation activities hence they did not have control over the project activities. Information was disseminated through the media and through printed material. This form of participation is explained in Table 2.1 as Passive Participation where the community is told what is going to happen or what has already happened. It is a unilateral announcement by leaders or project managers without listening to people's responses or even asking their opinion (Pretty and Kumar, 2002).For projects to be sustainable in the long term, the stakeholders' have to be actively engaged in project activities and they should be involved in decision making.

5.4 Conclusions

This study concludes that communities need to be empowered in order to actively participate in development projects. The findings of the study indicated poor management of the Kiserian Dam project during the identification stage in terms of poor communication with the local community and poor coordination of mobilization activities. Lack of community empowerment results in low participation resulting in projects that are not sustainable in the long term. Participation must therefore take place in all stages of project development from initiation, planning, implementation and monitoring of project activities. All programs should demonstrate a highly proficient modus operandi with regards to people's participation.

The findings from the study clearly revealed that the Kiserian Dam project had not been delivered within the allocated time period at the time of the study. This was partly due to delays in completion of project identification and planning activities. An analysis of the local community participation in the planning stage indicated that 60% of the respondents did not participate in planning activies.The study also revealed poor time management on the part of the implementing agencies during the planning stage. Project managers of development projects need to strictly follow the time schedule of project activities in order to avoid delays in project completion.

The study further revealed that majority of the local community did not have the required skills and expertise to be engaged in professional work during implementation of the Kiserian Dam project. However the implementing agency offered most of the casual jobs to outsiders rather than to the local community. Only 2% of the respondents were engaged to provide manpower during the implementation stage.

Participating in implementation activities can give people the bargaining power in decision making and more knowledge of what decisions are needed and appropriate. Other benefits that could result from participation in implementation activities include; income generation, ownership of the project and understanding of the expectations of project quality performance.

From the study findings, it was clear that the local community did not have control over monitoring and evaluation activities of the project. Most of the information was disseminated through the media and printed material. This indicates lack of accountability on the part of the implementing agency.

Overall community participation in the various stages of project development revealed that only 6% of the respondents were actively involved in the project with a mean score of 2.3 on a 5-range Likert scale. This shows that the local community was not empowered to participate in project activities.

5.5 Recommendations

The following recommendations were informed by the study findings:

i) The local community should be mobilized so as to build an interest in participating during project development. Mobilization should start at the initial stage of project conceptualization. Frequent facilitation, support and monitoring from relevant institutions at different levels of project development are important and highly recommended so as to guarantee project sustainability.

ii) Training and capacity building programmes are needed in which facilitators who are identified and trained by the Department of Social Services can interact with and exchange ideas with local communities and, at the same time, instill new ideas.

The training should be broad and touch on all areas relating to development, not narrowly on project identification and implementation. Once rural communities have been sensitized and encouraged to take the initiative in this direction, external support could be sought for more capacity building.

iii) Policymakers of development projects and project managers need to ensure that communities are not only involved in the development process, but are also encouraged by development committees at divisional and location levels (community-based development agencies) to alter their current low participation which inhibits their development. If the declining rural economy is to be revived, all officials at all levels must begin by informing the rural population of what is happening and by guiding them towards full participation in projects meant for their own welfare. Such policies may be diffused successfully by the managers of development namely, The District Development Committee, The Division Development Committee, The Location Development Committee and the Sub-Location Development Committee) and through community organizations at location and sub-location level. This should go beyond the rural household to grass root levels, schools and tertiary institutions of learning. In order to guarantee sustainability of this spirit and motivate the rural people. Policymakers and project managers now need to devise ways of invoking more participation and ensuring that participation is sustained.

iv) The project implementing agencies must accept the challenge for project sustainability and carry the whole community along. The leaders must be out rightly accountable and answerable to beneficiaries rather than to political and bureaucratic superiors. The records should be well documented in a simple language and accessible to every member of the community.

v) The leaders should also be transparent in their dealings with the members of the community and call for regular meetings where the people are briefed on the sustainability efforts and challenges ahead. Therefore, the suitability of infrastructure projects depends crucially on an enabling institutional environment which requires government commitment and accountability of the implementing agencies to the local communities.

5.6 Suggestions for Further Research

i) An assessment of community capacities to sustain infrastructure projects should be undertaken.

ii) Research on how capacity building has been incorporated in the education curriculum should be undertaken in an effort to ensure that the community gets empowered to participate in development projects through the school curriculum.

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APPENDICES

Appendix 1: Letter of Transmittal

Faith Mugure Mukunga
Masters Student
P.O Box 15646-00100
NAIROBI

Dear Respondent,

I am a post-graduate student at the University of Nairobi. In order to fulfill the requirements for the award of a Master of Arts degree in Project Planning and Management, I am conducting a research entitled "Influence of Community Participation on the Performance of Kiserian Dam Water Project, Kajiado County, Kenya".

The study will inform policy makers and empower project managers to improve planning and implementation towards the goal of sustaining project benefits. This will ensure that the communities own the projects and that their needs are met.

You have been selected to assist in providing the required information, as your views are considered important to this study.

I am therefore kindly requesting you to fill this questionnaire. Please note that any information given will be treated with utmost confidentiality and will only be used for the purposes of this study.

Thank you

Yours Faithfully,

Faith.M.Mukunga
REG.No. L50/64431/2010

Appendix 2: Questionnaire for Household Heads

Instructions

i) You are not required to fill in your names. All information given will be treated with utmost confidentiality.

ii) Please fill in your answer on the provided spaces or tick (√) accordingly.

SECTION A: Demographic Information

1) Kindly indicate your gender A)Male ☐ B) Female ☐

2) How long have you lived in Kiserian?

A.Less than two years ☐

B.3-8 Years ☐

C.9-14Years ☐

D.15-20 Years ☐

E.21-26 Years ☐

F.More than 26 Years ☐

3) What is your highest level of education?

A.Primary ☐

B.K.C.S.E ☐

C.A'Level ☐

D.Graduate ☐

E.Masters ☐

F.PHD ☐

G.No Education ☐

4). Do you know who initiated Kiserian Dam project? A) Yes ☐ B) No ☐

5).Was water the first priority among other needs? A) Yes ☐ B) No ☐

b) If no, please indicate the need that should have been given the first priority.

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SECTION B: Community Participation in the Identification of Kiserian Dam water project and its influence on project performance

6a).Did you participate during the project identification stage? A) Yes ☐ B) No ☐

b) If yes, In what ways did you participate during the project identification stage?

-Attending sensitization forums. ☐

-Attending dissemination workshops. ☐

-Participation in needs assessment survey. ☐

-Did not participate ☐

c) State any other ways in which you participated during project Identification stage.

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7) How many months would you estimate that you participated during identification of Kiserian Dam?

A.Less than one month ☐

B.2-7 Months ☐

C.8-13 Months ☐

D.14-19 Months ☐

F.More than 19 Months ☐

8) In your opinion, did the outcomes of community participation in the identification stage influence performance of Kiserian Dam Project? A) Yes ☐ B) No ☐

b) If yes, Please explain how the performance of Kiserian Dam was affected

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SECTION C: Community Participation in the Planning of Kiserian Dam water project and its influence on project performance

9a). Did you participate during the Planning of Kiserian Dam project? A) Yes ☐ B) No ☐

10) If yes, in what ways were you involved during the Planning stage?

-Attending land acquisition meetings ☐

-Participation in setting project goals and objectives. ☐

-Participation in scheduling of project activities and cost-benefit analysis. ☐

-Participation in determining means of measuring project achievements. ☐

-Participation in cost-benefit analysis. ☐

-Did not participate ☐

c) State any other ways in which you participated during the Planning stage.

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11) How many months would you estimate that you participated during planning of Kiserian Dam?

A.Less than one month ☐

B.2-7 Months ☐

C.8-13 Months ☐

D.14-19 Months ☐

F.More than 19 Months ☐

12) In your opinion, did the outcomes of community participation in the planning stage influence performance of Kiserian Dam Project? A) Yes ☐ B) No ☐

b) If yes, Please explain how the performance of Kiserian Dam was affected

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SECTION D: Community Participation in the Implementation of Kiserian Dam water project and its influence on project performance

13a). Did you participate during the Implementation of Kiserian Dam project?

A) Yes ☐ B) No ☐

b) If yes, in what ways were you involved during the Implementation stage?

-Attending site meetings. ☐

-Attending training workshops/on –the –job training☐

-Providing manpower ☐

- Did not participate ☐

c) State any other ways in which you participated during the Implementation stage.

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14a) In your opinion, did your participation in implementation activities improve your livelihood in any way? A) Yes ☐ B) No ☐

b) If yes, Please explain how your livelihood was improved.

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SECTION E: Community Participation in Monitoring and Evaluation of Kiserian Dam water project and its influence on project performance

15a) Did you participate during the Monitoring and Evaluation of Kiserian Dam project?

A) Yes ☐ B) No ☐

b) If yes, in what ways have you been involved in Project Monitoring and Evaluation activities?

-Attending public meetings on reporting project progress. ☐

-Access to information on progress reporting e.g posters and pamphlets ☐

-Participating in Field Visits ☐

-Did not participate ☐

c) State any other ways in which you have participated during Project Monitoring and Evaluation activities.

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16) In your opinion, did your participation/lack of participation in monitoring and evaluation activities influence project performance? A) Yes ☐ B) No ☐

b)If yes, Please explain how your participation/lack of participation influenced the performance of Kiserian Dam project.

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17) Please tick (√) the number that best describes your overall participation in the development of Kiserian Dam project.

KEY

5= Very Much 4= Much 3= Moderate 2= Little 1= Never

a) Identification Stage	1	2	3	4	5
b) Planning Stage	1	2	3	4	5
c) Implementation Stage	1	2	3	4	5
d) Monitoring and Evaluation	1	2	3	4	5

SECTION F: Challenges of Community Participation in development of water projects and their influence on project performance

18a).In your opinion, what are the challenges that hinder the community from participating in water projects?

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b) How does the challenges mentioned above influence project performance?

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19).In your opinion, how can performance of water projects be enhanced to ensure efficiency and sustainability?

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Thank You for participating in this research!!

Appendix 3: Interview Schedule for the Project Managers

1. When did the Kiserian Dam project start officially?

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2. The table below indicates the objectives of the Kiserian Dam project. Please indicate the level of achievement of each objective as shown below.

   1= Very High 2= High 3=Moderate 4=Low 5= Very Low

Project Objectives	Level of Achievement				
	1	2	3	4	5
i) To complete all project activities by January 2011					
ii) Improve livelihood of the local community during project execution					
iii) To report project progress to the local community periodically					

3. What were the challenges experienced in the process of achieving the above mentioned objectives?

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4a) .Was the Kiserian Dam project completed within schedule? A) Yes ☐ B) No ☐

b) If no, what were the challenges that led to delays in project completion?

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5a). Was the local community involved in the various stages of project development?

A) Yes ☐ B) No ☐

b) If yes, Please explain how the local community was mobilized to participate in each of the following stages of project development.

Project Stage	Community Mobilization Activities
i) Identification	
ii) Planning	
iii) Implementation	
iv) Monitoring and Evaluation	

6. What challenges did you face when engaging the community to participate in the various stages of project development?

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7. How did you overcome the above mentioned challenges?

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8. In your opinion how can performance of water projects be improved in order to efficiency and sustainability?

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Thank You for participating in this research!!

Appendix 4: Focus Group Discussions with Community Leaders and Area Chief

1. Was water the number one priority for the people of Kiserian?

2a) In what ways did the community participate in the Identification, Planning, Implementation and Monitoring of Kiserian Dam Water Project?

b) How was the community mobilized to participate in the identification, Planning, Implementation and Monitoring of Kiserian Dam project?

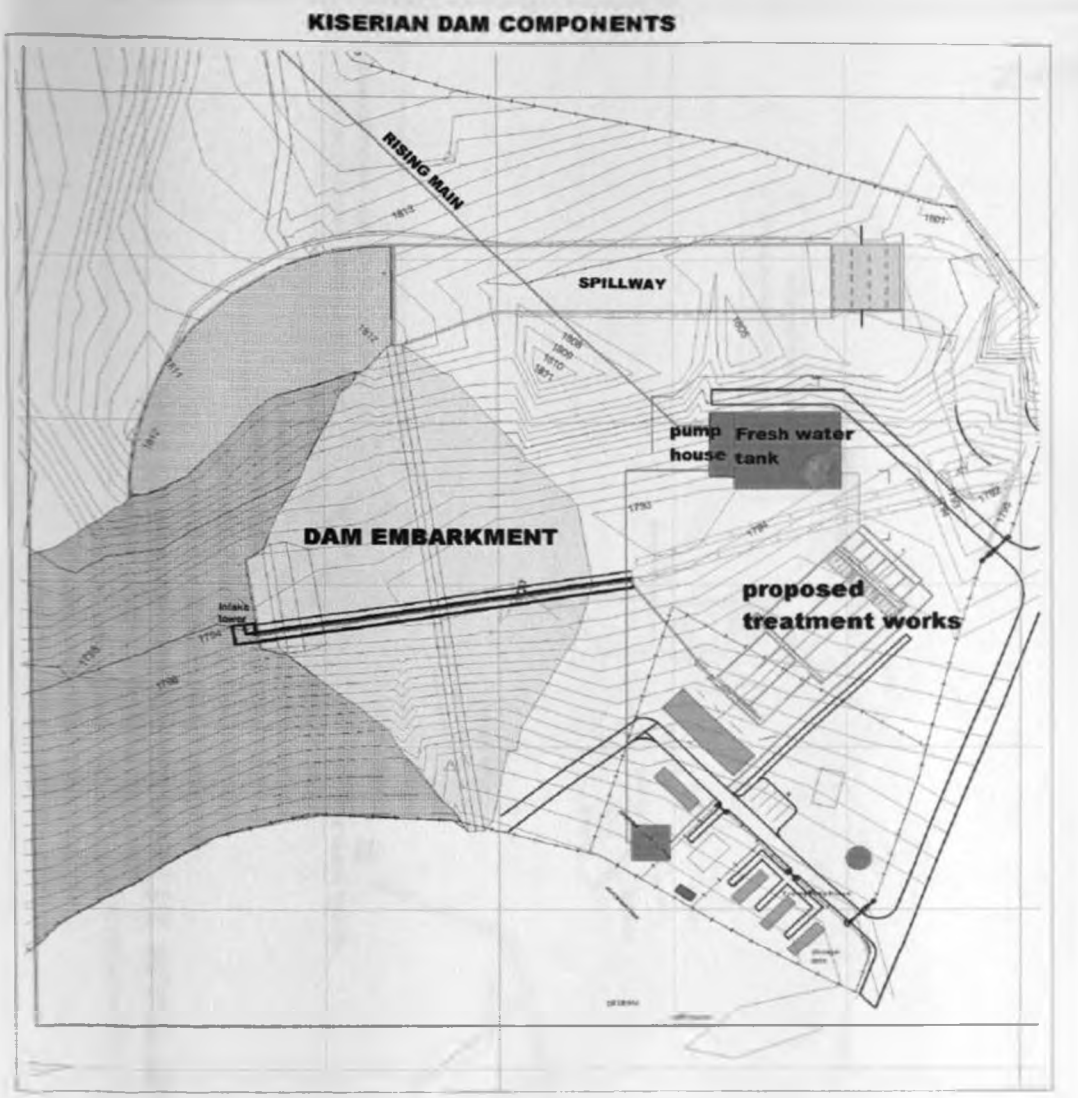
3. Has the project provided any job opportunities to the local community in Kiserian? e.g. the youth, experts etc

4. Has construction of the Kiserian Dam improved the livelihoods of the local community?

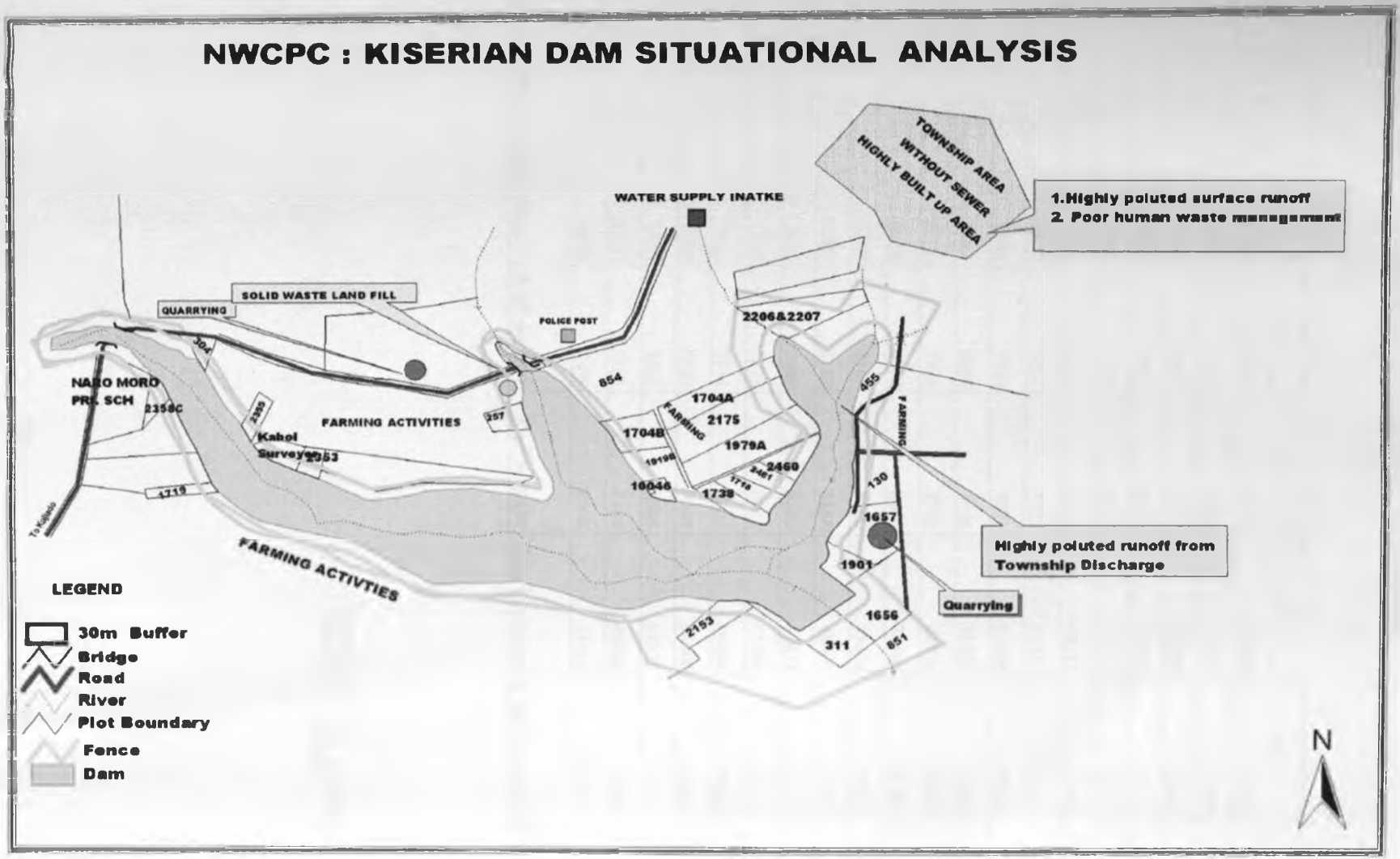
5. What are the challenges that faced community participation in the development of Kiserian Dam Water Project?

6. How can performance of water projects be improved to enhance efficiency and sustainability?

Appendix 5: Kiserian Dam Components



Appendix 6: Kiserian Dam Situation Analysis



Appendix 7: Reliability Test Results

x	y	xy	x^2	y^2	nx^2	ny^2	nxy
85	85	7225	7225	7225	43350	43350	43350
88	89	7832	7744	7921	46464	47526	46992
80	88	7040	6400	7744	38400	46464	42240
86	87	7482	7396	7569	44376	45414	44892
90	92	8280	8100	8464	48600	50784	49680
87	90	7830	7569	8100	45414	48600	46980
85	85	7225	7225	7225	43350	43350	43350
88	89	7832	7744	7921	46464	47526	46992
80	88	7040	6400	7744	38400	46464	42240
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90	92	8280	8100	8464	48600	50784	49680
87	90	7830	7569	8100	45414	48600	46980
85	85	7225	7225	7225	43350	43350	43350
88	89	7832	7744	7921	46464	47526	46992
80	88	7040	6400	7744	38400	46464	42240
86	87	7482	7396	7569	44376	45414	44892
90	92	8280	8100	8464	48600	50784	49680
87	90	7830	7569	8100	45414	48600	46980
$\sum x$ =1725	$\sum y$ =1775	$\sum xy$ =153177	$\sum x^2$ =148971	$\sum y^2$ =157633	$\sum nx^2$ =893826	$\sum ny^2$ =945798	$\sum nxy$ =919062

REPUBLIC OF KENYA

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Our Ref: NCST/RCD/14/012/1392

Date: 1st October 2012

Faith Mugure Mukunga
University of Nairobi
P.O.Box 30197-00100
Nairobi.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "***Community participation and performance of Kiserian Dam Water project, Kajiado County, Kenya,***" I am pleased to inform you that you have been authorized to undertake research in **Kajiado County** for a period ending **31st December,** *2012.*

You are advised to report to **the District Commissioners and the District Education Officers, Kajiado County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR M.K. RUGUTT, PhD, HSC.
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioners
The District Education Officers
Kajiado County.