

**AN ASSESSMENT OF COMMUNITY PARTICIPATION IN DESIGN,
IMPLEMENTATION AND MANAGEMENT OF KIAMBAI WATER AND
SANITATION PROJECT: KAKSINGRI LOCATION
HOMABAY COUNTY. KENYA**

BY

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF
PROJECT PLANNING AND MANAGEMENT**

SCHOOL OF PLANNING AND ARCHITECTURE

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DECLARATION

I declare that this research project has not been previously presented for a degree in Maseno University, or in any other University. The work presented herein has been carried out by me and all sources of information have been acknowledged by means of references.

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[PG/PA/6002/2013]

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

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DEDICATION

I dedicate my work to my father Stephen Genga, husband Bornphas Maoro, brother Denis Ochieng, my daughter Christine Amelia and my son Nicholas Blair; you have been there for me like no one else has. I adore you and thank the almighty God for having you in my life.

ABSTRACT

In sub-Saharan Africa, about 250 million people (67%) lack safe accessible water while 81% of the rural population lacks sanitation facilities (Rose and Vincent 1999). People spend 40 billion hours every year just walking for water. Women and children usually bear the burden of water collection, walking miles to the nearest source. Along their long walk, they are subjected to a greater risk of harassment and sexual assault. According to National Water Policy (2002) despite significant investment in the Rural Water Supply in Kenya since the early 1970s, presently only about 45% of the rural population has access to a reliable water supply service. However, due to poor operation and maintenance that may be contributed by lack of ownership, over 30% of the rural water supply schemes are not functioning. The involvement of all community members including women, youth and the poor is of critical importance in rural water supply and sanitation projects. Project implementers should consider the views, opinions and perspectives of the community in development projects for it to remain sustainable. This study seeks to link community participation and sustainability of water services in rural area. The purpose of the study was to assess community participation in design, implementation and management of Kiambai Water and Sanitation Project. The objectives of the study were; to examine the level of community participation in the design of Kiambai Water and Sanitation Project, to examine the level of community participation in the implementation and management of Kiambai water and sanitation project and to determine challenges to sustainability of Kiambai water and sanitation project at Kaksingri location. The study was anchored on the descriptive research design, data collection techniques included; interviews and questionnaires. The study used simple random sampling to select 270 household from the target populations of 2,250 households. The data obtained was analyzed using descriptive statistical tools and the results presented in form of frequency tables, pie charts and bar graphs. The findings were that the benefits associated with proper community participation included an assurance of the continuity of the project, timely maintenance/repairs, harmony/conflict management, a strong sense of ownership of the projects, better service delivery and expansion of the project. The study also established that even though consultations were found to have been made, it was minimal and therefore the community was not given enough opportunity to impact meaningfully on the water and sanitation project. Three main indicators of sustainability; social, institutional and technical aspects were interrogated. On the social aspect the respondents identified inadequate participation of community members, poor material quality, design flaws and unskilled operators as the main cause of failure. On Institutional sustainability they identified frequent break-downs, unskilled operators and poor remuneration. On technical sustainability the tariffs were found to be unstable and insufficient to cover the running costs and impossible to adjust. From these findings the research concluded that the failure of Kiambai Water and sanitation project was due inadequate community participation in design, implementation and management of the water project. The study recommends that water projects ought to be community centered and responsive, not supply driven projects; before implementation of any community based project, community must be educated on current government policy on community participation and involvement in decision-making in the project cycle.

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LIST OF ABBREVIATION & ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CDD	Community Driven Development
CM	Community Management
CMC	Community Management Committee
CP	Community Participation
CPC	Community Project Committee
DFID	Department for International Development
DRA	Demand Responsive Approach
FGD	Focus Group Discussion
ISS	Institute of Social Studies
GoK	Government of Kenya
MDG	Millennium Development Goals
LG	Local Government
LGRP	Local Government Reform Program
NBS	National Bureau of Statistics
NGO	Non- Governmental Organization
NSGRP	National Strategy for Growth and Reduction of Poverty
NWP	National Water Policy
NRWSSP	National Rural Water Supply and Sanitation Program
PHAST	Participatory Hygiene and Sanitation Transformation
PRA	Participatory Rural Appraisal
PWP	Public Works Program
RUA	Rural Appraisal
RWS	Rural Water Supply
SDIA	Supply Driven Implementation Approach
CDF	Community Development Fund
KSH	Kenya Shillings
UNDP	United Nations Development Program
URT	United Republic of Kenya
UN	United Nations
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VWC	Village Water Committee
VF	Village Fund
VWF	Village Water Fund
WASH	Water and Sanitation for Health
WB	World Bank
WC	Water Committee

OPERATION DEFINITION OF KEY TERMS

Participation is an approach through which beneficiaries and other stakeholders are able to influence project planning, decision-making, implementation and monitoring phases.

Community participation is a process which provides private individuals and stakeholders with an opportunity to influence and share control over development and public decisions on resources which affect them.

Design is defined as to plan and make decisions about (something that is being built or created): to create the plan, drawing, etc that show how something will be made

Implementation is the carrying out, execution, or practice of a plan, a method, or any design, idea, model, specification, standard or policy for doing something. As such, implementation is the action that must follow any preliminary thinking in order for something to actually happen.

Management refers to the capabilities and willingness of the beneficiaries to take charge and determine the nature of development affecting them.

Sustainability is a mode of resource use, including water, which aims at meeting human needs while preserving the environment so that these needs can be met not only in the present but also for generations to come.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Globally, water resource is very essential for socio-economic development and for maintaining healthy ecosystems. Properly managed water resources are a critical component of growth, poverty reduction and equity. Access to adequate, safe and clean drinking water is one of the basic human entitlements. According to United Nations (2000) national and international efforts have been in place with a view to ensuring availability and access to water because these aspects are directly linked to promotion of quality of lives of the people.

According to World Bank (1994) the past several decades of development funding has demonstrated the failures of top-down approaches to development. Not only does the provision of public goods remain low in developing nations, most projects suffer from a lack of sustainability. A possible reason for these failures is attributed to the lack of local participation.

In sub-Saharan Africa, about 250 million people (67%) lack safe accessible water while 81% of the rural population lacks sanitation facilities Rose and Vincent (1999). People spend 40 billion hours every year just walking for water. Women and children usually bear the burden of water collection, walking miles to the nearest source, which is unprotected and likely to make them sick. Time spent walking and resulting diseases keep them from school, work and taking care of their families. Along their long walk, they are subjected to a greater risk of harassment and sexual assault. Hauling cans of water for long distances take a toll on the

spine and many women experience back pain early in life. With safe water nearby, women are free to pursue new opportunities and improve their families' lives. Kids can earn their education and build the future of their communities. A clean water project nearby means more than safe drinking water to women and children in developing nations; it means time, freedom and incentive to change their communities Kallabaka (1989).

According to National Water Policy (2002) about 80% of Kenyan population of 37 million lives in rural areas. Despite significant investment in the Rural Water Supply (RWS) since the early 1970s, presently only about 45% of the rural population has access to a reliable water supply service. However, due to poor operation and maintenance, over 30% of the rural water supply schemes are not functioning.

A review of the water sector carried out in 1995 identified a number of shortfalls in the National Water Policy (1991) amongst which are: the under estimation of the role that could be played by the private sector, a necessity of a stronger involvement of the various stakeholders especially the communities and an inadequacy of the legal and institutional framework.

To emphasize this in 1991 the Kenyan government launched the first National Water Policy NAWAPO (1991) which focused on participation and cost sharing during the process of water projects construction, operation and management of the community domestic water supply projects. This mainly aimed at including communities in all water project management stages, from that stage of planning, building, implementing/operating and evaluation. Then the Government of Kenya introduced stakeholder participation in water

projects management through 1998 Water Act and later on the Kenya National Water Policy of (2002) The water policies and the attendant Acts among other things insists on the following aspects: - “Ensuring full participation of beneficiaries in planning, construction, operation, maintenance and management community water projects in rural areas”.

There are certain things that can hinder community participation process in various ways as follows; Firstly, Government and development practitioners, political and legal structure do not encourage or give room for community participation. Most of the programs for community development are identified by the government or non-government organizations. Communities are not involved in the implementation level and as a result most of the programs fail as they do not meet the community expectation and the real community needs.

Secondly, Government and non-government organizations that work with communities are often primarily motivated by their strong sense of urgency about achieving their preset objectives and timeline. They are likely to be frustrated by what they perceive to be a lack of progress. At the same time community members can be irritated, offended or simply confused by the expectation of the facilitator. For example most of government and donor funded projects do have pre-determined life spans of initiatives. Many community projects have a pre-planned project design imposed on them without the wide participation of community members. Typically, such a design has a specific schedule, including a fixed end-date and rigid reporting requirements. This builds inflexibility into the project from the start and frequency imposes an unrealistic pace on it. Inflexibility planning often cannot adapt to events that are highly important to community members.

Thirdly, incomplete participation or representation in decision making causes a risk that community leaders and influential people in the community whether traditional or external do not represent the whole community, but instead focus on their own concerns or agendas. At the same time, certain groups within the larger community whose participation can be highly important to community economic development may be marginalized or ignored due to culture and classes

According to World Health Organization (2007) Water is being implicated with almost 80% of all sickness and disease worldwide through inadequate sanitation, polluted water, or unavailability of water. At any given time it is being estimated that half of World's hospital beds are occupied with patients suffering from water- related diseases.

This research, therefore, has explored possible arrangements which can increase the share of community involvement in the development and operation of water supply schemes. In order to understand why there have been limited applications of this strategy, Kaksingri location experience with community participation is examined. It is observed that the present organization and operational procedures of the water resources management have not adequately addressed the acute problem of water services in rural areas. This study has explored the role of increased participation, local communities' involvement in all aspects of water scheme development.

It is often argued by rural water experts, The World Bank and other donor agencies argue that citizen participation is fundamental to the success of water supply in rural areas particularly in developing countries by Schouten and Moriarty (2003).

1.2 Problem statement

Water is not like other commodity in the sense that it is essential to human life. It is also essential to economic growth and poverty reduction. About 18% of the world's population lacks access to improved water supply, According to WHO, 1.6 million deaths per year can be attributed to unsafe water and lack of sanitation” Pérard (2007). “We shall not finally defeat AIDS, tuberculosis, malaria, or any of the other infectious diseases that plague the developing world until we have also won the battle for safe drinking-water, sanitation and basic health care” Kofi Annan, Former UN Secretary-General, Geneva (2002). As a matter of fact access to safe drinking water and basic sanitation has been listed by the United Nations as one of its 2000 Millennium Goals (MDG's)

According to United Nations (2001) while the international community has made advancements toward this goal over the past decade, progress in rural areas is lagging relative to urban areas. Poor water supply and sanitation services as a matter of fact continue to be a critical problem in rural areas despite the considerable effort to improve and expand its access. The reason why rural water did not improve was that beneficiaries were not involved in design, implementing and managing the water systems. There is no clear evidence or little has been done to assess the effectiveness of water supply and sanitation under Community Participation as an alternative way of managing water resource with specific to rural setting. Many projects sustainability are uncertain, they work for short periods and collapse after funding institutions cease to provide support both financially and technically.

Whereas there are many studies that have been conducted on the sustainability of rural water supply programs, only a few of these have paid specific attention and / or established

practical linkage between community participation and sustainability. This study has therefore seeks to fully investigate the linkage between Community Participation and rural water schemes sustainability. By taking a study of the stalled Kiambai water project in Kaksingri Location of Homa-bay County, it seeks to establish the importance of involvement of key stakeholders like the community, private sector and charity organizations in the development water projects. This study also intends to unearth the underlying reasons for the collapse of this vital project and establish the extent of community participation if any and weather this had any significance to the collapse.

1.3 Objectives of the study

The main objective of the study was to assess community participation in design, implementation and management of Kiambai Water and Sanitation Project at Kaksingri location.

1.4 The specific objectives include

1. To examine the level of community participation in the design of Kiambai Water and Sanitation Project at Kaksingri location.
2. To examine the level of community participation in the implementation and management of Kiambai Water and Sanitation Project at Kaksingri location.
3. To determine the challenges to sustainability of Kiambai Water and Sanitation Project at Kaksingri location.

1.5 Research questions

- 1) What was the level of community participation in the design of Kiambai Water and Sanitation Project at Kaksingri location?

- 2) What was the level of community participation in the implementation and management of Kiambai Water and Sanitation Project at Kaksingri location?
- 3) What are the challenges to sustainability of Kiambai Water and Sanitation Project at Kaksingri location?

1.6 Significance of the study

The study will offer valuable insight to the government and non-government organization of the strategic importance of involving community in the design, implementation and management of water and sanitation project.

It will add information to the limited empirical knowledge about link of community participation, planning and development of water and sanitation project in communities in a developing economy like Kenya, where community participation is gaining popularity as a vital tool for development of the nation.

1.7 Scope of the study

This study was confined within three sub location of kaksingri location which reasonably represent other local water projects of such nature. Kiambai Water and Sanitation Project is in Kaksingri location, Suba sub-county. Suba Sub County lies between longitudes $33^{\circ} 2' W$ and $36^{\circ} 0' W$ and latitudes $0^{\circ} 13' S$ and $2^{\circ} S$. Kaksingri location is found in Suba Sub-County being one of the sub- county in Homa-bay County. The location is bordered by Gwassi division to the west, Mfangano Division to the north and Mbita Sub-county to the south. Kaksingri location has a population of 14,670 persons; kaksingri west sub location has a total of 2,250 persons and covers a surface area of 234 Km. The main economic activity in the location is farming with a bias towards crop farming and livestock keeping at a

subsistence level. The presence of Non-government organization has contributed to existence of projects like toilets, hospitals and even schools in the location. However the results and recommendations intend to serve ministry of water and local government authority and other private sector that major on water and sanitation project.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter provides the reviewed literature of the studies that have been done before and related journal, books, newspapers and magazines, the review will be done in accordance with objectives of the study.

2.2 Community participation in design of water and sanitation project

Community participation is a process which provides private individuals and stakeholders with an opportunity to influence and share control over development and public decisions on resources which affect them. Ekong (2003) defines it as a social process through which specific groups with shared needs, often but not always living in a defined geographical area, actively pursue identification of their needs, make decision and establish mechanism to meet these needs.

Community participation in design of water and sanitation project has long been considered as a vital component of the democratic decision-making process, since it accords the public the opportunity of playing active though not necessarily direct roles in community decisions and financial contributions towards communities programmes. Participation in the design stage is an approach through which beneficiaries and other stakeholders are able to influence project planning, decision-making, implementation and monitoring phases. On the other hand, participation in the design stage is considered to be a prerequisite for project ownership, successful implementation and sustainability of the projects in question. Participation does not mean acceptance of all ideas from diverse groups. In participation, there is a need to combine indigenous and intellectual knowledge. However, care must be

taken so that intellectual knowledge does not influence that of the indigenous” by Kasiaka (2004).

Recent reports of World Bank and US Agency for International Development stresses the fact that by accepting that communities exist, then it becomes meaningful to talk of them owning and sharing things and then to speak of the equity with which these are owned or shared. Equity includes both a sense of equality and a sense of being entitled to a share in ownership. Equity is crucial to community management. It implies that, although communities are diverse, everyone in the community should profit in the same manner from a water supply system. It accepts that communities must mean more than rich getting together to buy themselves an expensive water supply system. To deal with this view of community means to acknowledge diversity” by Schouten and Moriarty (2003) all people covered by a project, irrespective of gender, caste or class have access to clean water. However, they may not all have equal access to all the benefits which are part of the work.

Many important decisions made during project design are made by well-off and influential men in the village. Women and poor men are not equally involved, both at times are poorly represented in project management committee. Those who probably have the most to gain from these water supply and sanitation systems, mainly poor women and men should be involved in the management of the water system. Ibid (1991) argues that those projects which involve the widest possible participation of people whose needs are addressed are mostly likely to be effective. According to McCommon (1990) Community Participation is

taken to mean that community plays an active role in its own affairs by sharing and exercising political and economic power.

During the last decade, many countries in Central and Eastern Europe have been undergoing major changes, both in their political and economic systems Chowdhury (1996). Among the challenges that these countries have been facing is the issue of incorporating community into the decision making process. According to Kaufman and Poulin (1996) very often community do not understand their rights and responsibilities and therefore are not able to express their opinions and concerns. Even though the process is slow and tiresome, the countries of this region are making great efforts to strengthen their democratic systems Habermas (1984). Public participation is a key ingredient in the recipe for democracy. Public participation increases transparency in the decision making process. If community is involved in the policy development, they will be able to make government officials more accountable for their decisions. Therefore, individuals must be involved in the decision making process because their input can help create useful solutions to problems, such as community housing or education, which are an integral part of their everyday lives.

Uphoff (1997) argue that in the economic and political conditions, prior to 1960, planning was taken into consideration by governments, especially on its economic and management aspects, so it had imperative and top-down characteristics, on the other hand ,growing trend of industrialization and urbanization caused the domination of scientific and technocratic elites especially engineers and architects in this scope.

From 1960 on vast critical reactions impacted this situation and caused planning change from imperative and technocratic to participatory and democratic shape, sustainable development,

rapid growth of demography and human growth, development concept of civil society and present cultural reactions placed urban planning in a critical situation in a type of theoretical and practical difficulties Pearce (1996). In order to realize from this critical situation, planning begin with democratic methods, searching justice and human aims.

Some researchers believe that we ought to speak about planning through debate and communicative turn in planning theory. According to Fuglesang and Chandler (1993) Most practical and theoretical efforts that have been done in this field are based on a combination of methods and principles of planning to democracy, public and private sector participation, defense of poor people and protection of cultural values, thus providing

Bretty (2003) conceptualizes these levels in terms of ‘weak and strong participation’. According to his views, weak participation involves “informing and consulting” while strong participation means “partnership and control”. He argues that, in practice agencies managing complex projects find it hard to move from the ‘weak end’ of the continuum and tend to assume that, intended beneficiaries will be consulted during the project design to take into account their felt needs and aspirations. Wilcox (1994) cautions that, information giving and consultation are often presented as participation leading to disillusionment among community interests.

However, the problem with levels of participation is that they imply coherence, when most development organizations operate simultaneously in a wide range of participatory modes Mosse (1996). One level on the continuum is not necessarily better than any other as different levels are appropriate at different times and contexts to meet the expectations and

interests of different stakeholders Wilcox (1994). Oakley (1991) cites an analysis of a Danish funded rural water supply project in Tanzania, where he observes that participation had ranged from non-participation and manipulation over information and consultation to some degree of partnership and delegation of power. In another study of Malawi Social Action Fund (MASAF) projects, Dulani (2003, p.12) concluded that, the level of community participation was limited to being informed what had already been decided by other key players which implied “passive participation by consultation”.

Typology of Participation

Level	Characteristics of each type
1. Passive Participation	According to Pretty (1995) and Kumar (2002) 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 organization. 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-Mobilization	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 mobilization and collective action may or may challenge existing inequitable distributions of wealth and power.
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Source: Adapted from Pretty (1995, p.1252) and Kumar (2002, pp.24-25).

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.

Community Participation discourse described different levels in which beneficiaries of any development initiative should be involved. This can be typically applied in rural water and sanitation projects Schouten and Moriarty (2003).

Level of Community Participation

Source: WASH technical report No. 67, 1990

Levels	Responsibility	Authority	Control	Management capacity
1	External agency, little community responsibility	External agency; informal community consultations	External agencies; limited community participation	Insufficient
2	External agency, community is responsible for operation	External agency; limited formal role for community institution	External agency; moderate community participation	Limited
3	Joint; community is responsible for operation and maintenance	Joint; limited formal role for community and agency	Joint; strong community participation and limited community management	Moderate
4	Community; external support	Community; external support	Community; external support	Sufficient
5	Full community responsibility	Full community authority	Full community control	High

Source: WASH technical report No. 67, 1990

(USAID) and WASH point out that Community Participation may have considerable potential for improving development planning and sustainability Schouten and Moriarty (2003). The objectives of Community Participation in the context of water project and for the purpose of this study includes; sharing project cost, increasing projects efficiency, increasing project effectiveness, and increasing community empowerment. Preconditions for

Community Participation despite the rather complex nature of community participation in the management of water resources, it is possible to identify the preconditions that create the enabling environment in which community management can occur. WASH identified the important preconditions for Community Participation which is likely to include:

There must be community demand for improved system. The information required to make informed decisions must be available to the community. Technologies and levels of service must commensurate with the community's needs and capacity to finance, manage, and maintain them. The community must understand its options and be willing to take responsibility for the system. The community must be willing to invest in capital and recurrent costs. The community must be empowered to make decisions to control the system. Effective external support must be available from governments, donors, and the private sector (training, technical advice, credit, construction, contractors etc.) McCommon (1990).

The community must be willing to support an **appropriate tariff structure** that is reasonably framed in order to cope up the ever increasing operation and maintenance cost, create a sense of ownership in the community and ensure sustained water supply service over time.

2.3 Community participation in implementation and management of water and sanitation project

The most critical stage of community participation is the pre-damming stage since this has the potential of shaping the direction of communities' involvement in the other stages of project development. The nature and purpose of the dam should influence the form, when and how communities should be involved in dam development. The scale of the dam and the

primary purpose for which it is being constructed has varied ecological impacts as well as social and economic implications for would-be affected communities.

Community participation in initiation, planning and design of the project enables the community members to: understand the scope of the project; assess the implications of the project on their livelihoods; minimize risks and mitigate adverse impacts; provide alternative scenarios that address their felt needs; and, offer their consent to the project and make useful inputs to its implementation and maintenance. Approaches that could be adopted to achieve the above objectives include sensitization, education, consultation and discussions at open-fora, seminars and workshops among others. Views of all community members including women should actively be sought and they should form part of the process of deciding the direction of the project.

A possible strategy for seeking community involvement is the creation of a platform for promoting and facilitating stakeholder discussions. UNEP (2007) suggests the establishment of a bi-partisan body to aid in the development of an effective framework for community participation in dam development. Would-be dam affected communities should be made members of this body and should constitute an integral part of the decision-making process. Avenues of communication channels should be created for addressing issues of interest. IAP2 mentions some of the options as public meetings, surveys, workshops and deliberate polling.

Damming Stage (implementation/execution) Would-be affected communities constitute a labor pool for recruiting unskilled labour for the development of dam projects. This should not only help create employment and wealth for local communities but also create a sense of partnership between local communities and technical experts as well as government agencies. This is particularly important in the case of irrigation dams where local community members are direct beneficiaries of the project. Under such projects the employed receive training, build their capacity and are empowered to manage the project. UNEP (2007) recommends the setting up of a recruitment agency which should have the responsibility of finding people to meet the unskilled labour requirements of the implementing agency.

UNEP (2007) further recommends that the core of the unskilled labour should be from the local people in whose community the project will be developed. Non-local unskilled labour should only be contracted to meet any excess demand for labour that cannot be provided by the local people. Where would-be affected community members possess such skilled labour as may be required by the implementing agency, they should be given preferential treatment in the recruitment process.

According to Sriskandarajah (1991) Good maintenance and effective management of dams are essential prerequisite for sustaining benefits from the project. Sustainability is better seen as a measure of relationship between the community and the project rather than an externally designed goal to be achieved. The level of community involvement in the maintenance of dam project will necessarily vary in accordance with the nature and purpose of the dam. For example, community-based small scale irrigation dam would necessarily require greater

community involvement in its maintenance and management compared to large scale hydro-power dam which require high level technical expertise. Monitoring is an essential activity under maintenance which permits detection of problems so that remedial measures could be undertaken Daily Graphic (2007).

Monitoring involves the conduct of investigations and this requires all stakeholders actively working together in some form of partnership and under some form of established institutional and legal framework. An independent body of technical experts should have the mandate to constantly conduct environmental studies on dam impacts especially in the case of large-scale dams. Studies should be designed to include direct community interaction with the grass-roots to get very fair and balanced findings. Thus, partnership and networking are essential at this level and should form the cornerstone of successful community development.

Many organizations have specific processes and standards for requesting and evaluating a project. There will often be norms for assessing the financial benefits, e.g. payback period, internal rate of return, discounted cash flow etc. There may also be standard procedures for presenting a business case and obtaining approval for the capital investment. The overriding objective of CDF is empowerment of communities Kalitsi (1970), Diaw and Schimdt-Kallert (1990) and Yeboah (1999).

A project is considered success if its implementation facilitates community empowerment which can be assessed on factors such: Whether communities are participating in decision making, Whether accountability has been enhanced and whether organizational capacity has been enhanced at the community level, Whether operation and maintenance arrangements are

in place, Whether communities are accessing information to make informed decisions. “Water supply facilities provided without the active participation of the beneficiaries in planning and management are often not properly operated and maintained and hence are unsustainable” NWP (2002). Ownership of the facilities including water wells is neither perceived to be, nor legally vested in user communities. These factors lead to a lack of commitment to maintenance of the facilities by the users. Communities should be empowered to initiate, own and manage their water schemes including water wells.

In order to ensure that communities become legal owners of water supply schemes the following should be undertaken: Legal registration of water user entities should be instituted to ensure that communities are the legal owners of their water supply schemes including water wells. Roles, responsibilities, rights and limits of authority of water user entities should be clearly defined. Communities should be facilitated in acquiring technical and management skills NWP (2002) and Kasiaka (2004). Community Management refers to the capabilities and willingness of the beneficiaries to take charge and determine the nature of development affecting them. In water and sanitation systems, community management means that the community exercises responsibility for decision making and control over the subsequent execution of these decisions during project development. Schouten and Moriarty defined community management to mean that a community took on the full range of management tasks related to maintaining (and some cases developing) a domestic water supply.

These tasks include, setting tariffs and collecting payment, carrying out routine maintenance, and making decisions about system extension Schouten and Moriarty (2003). Community Management as defined above, is concerned with all issues pertaining to responsibility (ownership), decision making authority, and control over development project and system operations. Components of Community Management WASH mentioned three basic components of community management: Responsibility: The community takes on the ownership of and attendant obligation to the system. Authority: The community has the legitimate right to make decisions regarding the system on behalf of the users. Control: The community is able to carry out and determine the outcome of its decisions. *Unless the poor are given an opportunity to participate in the development of interventions designed to improve their livelihood, they will continue to miss the benefits of any intervention. Ekong (2003)*

2.4 Challenges to sustainability of water and sanitation project

Sustainability is a mode of resource use, including water, which aims at meeting human needs while preserving the environment so that these needs can be met not only in the present but also for generations to come.

The concept of sustainability can be traced back to the debate on sustainable development of the early 1970's and mid 1980's. United Nations in its 1987 publication titled "Our Common Future" defines sustainable development as a form of development that meets the needs of the present generations without compromising the ability of future generations to meet their own needs. Whereas different researchers have differently defined sustainability with respect to water supply projects, Parry-Jones (2001) asserts that most of these definitions mainly gravitate around issues to do with financing of regular operations, maintenance cost and continued flow of benefits over a long period of time.

However in context of this research our working definition of sustainability is anchored on whether or not water and sanitation services continue to work over a very long period time and whether or not it is accompanied by behavior changes. In this definition fronted by Len Abrams (1998), sustainability is all about the realization of enduring beneficial changes in rural water services, it has no time limit and goes beyond technical functionality i.e. it concentrates on the services rather than technology Jansz (2011). However, as population grows and economic expansion accelerates and intensifies, the use and abuse of water resources over the past few decades, a greater and greater imbalance between water availability and water demand has resulted. This imbalance has brought a veritable crisis with regard to water in many regions of the world, including but not limited to such problems as

widespread water scarcity, water quality deterioration, and the destruction of freshwater resources thus questioning the sustainability of water services.

Brikke (1997) argues that sustainability of water and sanitation project is said to be realized if the water sources are not overexploited, facilities for operation and maintenance are in place, funds are readily available and support system is in place. According to Parameswaran (1999), the technology used to implement project activities has direct link with its sustainability especially when operational and maintenance costs are to be met by the beneficiary communities.

Despite the good intention of the government, most of the constructed water schemes between 1970s and 1980s failed to achieve sustainability. This was due to a number of factors, among them being the practice of Supply Driven Implementation Approach (SDIA). In this approach, the government became the sole initiator, planner and provider of water service interventions. Furthermore, the system was so centralized in such a way that decisions made on water service allocations were externally oriented. The government was to carry out all operations and maintenance of village water schemes. In this context, all water works belonged to the central government. However, the outcome for this trend of affair was a lack of commitment to project beneficiaries, as far as issues of water services were concerned. Furthermore, due to economic crisis that occurred in the same period, all Ministries were forced to reduce expenditure on recurrent costs. Therefore, water scheme operations and maintenance were seriously affected David and Brikke (1995).

According to Kasiaka and Boko (2004, 2006) The economic crisis forced the government to introduce cost sharing strategies in construction, operation and maintenance of water

schemes. Hence, community-based water systems, following the 1991 NWP. NWP (1991) required communities to actively participate in water project cycles. Cost sharing strategies were to be effected through establishment of Village Water Committees (VWC) and Village Water Funds (VWF). It was through VWC that communities were to participate in the initiation phase, planning, construction, operation and maintenances of water project activities. However, free water services did develop in the peoples' minds a no commitment syndrome. Hence, it became difficult to convince the community to engage and participate in water project activities and particularly, paying for water service charges. Moreover, participation of beneficiaries was only limited to unskilled labour. Therefore, beneficiaries lacked the sense of ownership, which then affected operations and maintenance of water schemes as well as its sustainability TASAF Operation Manual (2005).

According to Kasiaka (2002) by the year 1996, it was estimated that water supply facilities installed in the country, had a capacity to cater for only 41% of the rural population. Moreover, about 30% of all installed water schemes were deemed broken down or some being partially out of action''. All these shortcomings happened due to a lack of the community's commitment and a sense of ownership. Thereby, no one was responsible to cover operations and maintenance costs. On the other hand, the government by then had no capacity to repair all water schemes, due to its financial crisis.

Stakeholder's participation in water resources management has not been effectively implemented in the past and even identification and categorization of stakeholders has not

been carried out in most parts of the country. The ministry of water has been implementing activities without adequate involvement and participation of stakeholders including local communities in planning, implementation, management and decision making at all levels on issues related to water resources.

This is the Study for Kiambai Water and Sanitation Project in Kaksingri location. Salient feature of these water projects is that they are `demand – responsive and community-driven` as the World Bank requires, and ensures citizen participation of the project development. They should be demand responsive because water projects should be the community's priority. CDF as a funding facility should not decide on behalf of the community but the community itself should make the decision in priority of other social priorities. Schouten and Moriarty (2003) argues that the role of community is pivotal in any project as initialized following an expression of demand from the community and a continuing commitment for active engagement through planning, construction, management, and maintenance of the system.

Water resources management includes the construction of physical features, such as dams and other storage projects, to conserve water during wet period for later use. It can take the form of cooperative legal agreements, negotiated over many years, between neighbours, states, or countries to share scarce water resources. According to Thomas (2003) Water management even involves volunteer community groups the inventory a watershed to protect a local drinking water supply” Over a billion people in the world lack access to safe water

supply. The operational mistakes of the 60s and 70s have now long been recognized and there has been a significant paradigm shift which puts more responsibility for implementing, managing and paying for their water supply in the hands of communities.

The belief is that by instilling a sense of ownership, promoting participation and sharing costs, the water supply services will be sustainable. Hard evidence to support the success of this new paradigm on a large scale is difficult to find. There are numerous small-scale models of successful sustainable community managed water supply projects, but most remain models, and are not scaled up. Two huge challenges now confront the sector. The first is ensuring community projects are sustainable and that adequate institutional arrangements are put in place to support community participation in the long term. The second is finding ways to increase coverage from the current islands of success to larger areas, reaching entire populations. The reason these challenges are so large, is because experience has shown that it is precisely the things that make a project more sustainable that also make it more difficult to scale up.

According to Schouten and Moriarty (2003) Communities do contain interest groups and they are made up of individuals, but they are more than interest groups and are more than the sum up of the individuals who make them up. The individual men, women and children, some rich, some poor, do not just co- exist in a shared space. They interact in many different ways, some visible, some invisible. The existence of community is not something that can be demonstrated, it is a philosophical point of departure that is shared, albeit implicitly, by most of the key players'' (Community responsibilities in water project to include providing required contribution, owning the projects, participating in project security, participating in the implementation of the project activities, monitoring of project activities, receiving and

discussing reports, and attending meetings in order to give suggestions and ideas to improve project performance Stephen (2002).

According to Bastian and Bastian (1996) Participation to development have been proliferating in third world countries since 1980`s, and they are now accepted components of projects design among mainstream donor agencies. The advocates and practitioners of the concept proclaim that people`s empowerment, local knowledge and community ownership are indispensable ingredients of project success and sustainability. Under label such as `people`s participation`, public involvement `, community participation`, social mobilization`, self-help development`, and `grassroots development`, projects have been initiated on smallholder crop and livestock development, irrigation and water supply alike. In assessing participation, it is argued that the adoption of participatory orientation in contemporary mainstream development is a somewhat peculiar turn of events. Demand for participation has their origin in radical politics. The democratization in development has been a long standing objective of radicals in both the developed and the developing world. The aim of this is to prevent adverse impact of normal development on disempowered actors and to generate receptiveness to the interests of the people. In the third world countries there is widespread resistance to development projects that serve the interests of national elites and donor nations or foreign policy. This has precipitated grassroots movements demanding participation in project planning and decision making Bastian and Bastian (1996).

Community participation meant to attain sustainability of water projects. Sustaining water projects need planning and use of comprehensive public representation, open and equitable access to information and direct participation of all affected interests in decisions about allocating those resources ICWE (1992). Therefore the significance of community

participation is: it empowers community members as it opens doors for exchange of ideas and sharing. It encourages active involvement through the participation of all members of the community in the design, implementation and management and it seeks to remove the barriers that limit the participation of marginalized citizens. It supports decentralized, non-hierarchical decision making processes that strengthen the autonomy of the individuals in the community.

Community participation also builds on local strengths, creativity and resources, and actively seeks to decrease dependency on, and vulnerability to, economic interests outside the community as a result sustainability is ensured.

Through community participation processes there is equity in decision making processes, resource mobilization and benefits of the Community Economic Development regardless of race, gender, income, age and ability. Both are motivated to participate in decision making on what actions to be taken, evaluate the results and take responsibility for both success and failure.

Community participation process builds the capacity of the community by encouraging the acquisition of relevant skills in the identification of local resources (stones, sand, water, manpower) implementation, management, monitoring and evaluation for the sustainability of the project.

Carter (2011) noted that the success of lasting sustainable water supply services is dependent on the interaction of a combination of factors that give due emphasis for citizens participation, external collaboration and technical support in order to ensure operation and

maintenance of the system. Local community participation plays a very vital role in the development and sustainability of water projects , in most cases it contributes to easy resource mobilization, ownership of the projects within the community and it also promotes high level of sustainability Erick (2008).There are various documentation on the importance of involvement of community in development but the gap is their functions at every stage of development, what might happen when they don't participate and areas that need capacity building before implementation starts. Community participation suggested by the World Bank as one of the alternative way of managing the water resources in rural areas, this is due to the fact that involving the beneficiaries would help to make the water resources sustainable, sense of ownership, legitimacy and protection of infrastructure.

2.5 Conceptual framework

Mugenda and Mugenda (1999) defined conceptual framework as a hypothesized model of identified concepts under study and their relationships. This diagram thus shows the relationship between the dependent and independent variables, their possible pattern of influence on each other.

This study sought to analyze the influence of independent variables (Citizen Participation) on the dependent variable (design, implementation and management of water project). The directions of the arrows show the interrelationships between the key variables of the study.

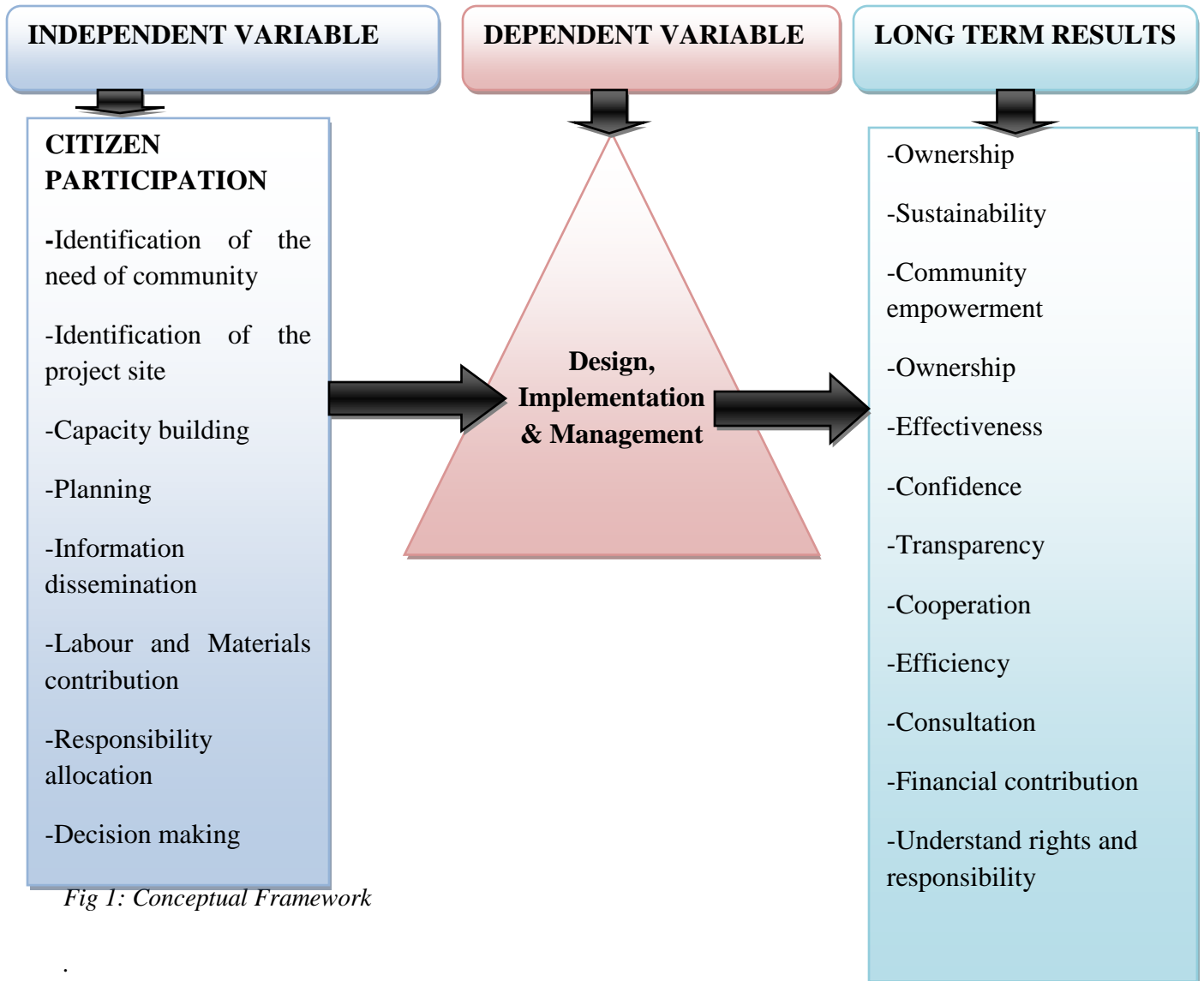


Fig 1: Conceptual Framework

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter on research design and methodology has the following sub-topics: research design, study location, target population, sample and sampling procedure, research instruments, validity and reliability, procedure for data collection, data analysis and ethical consideration.

3.2 Research design

This study adopted survey as the method to employ questionnaires as data collection technique involving Kiambai Water and sanitation Project as case study. According to Galala and Yusof (2013) Survey was selected as it is the most common and popular in social science research this method has become highly valued for its ability to provide insights that cannot be obtained by using any other means Peter (2009). Survey is inexpensive way to get information Mark (2008), flexible and can collect data in a wide range of information. It is also a standardized method and is thus the efficient means of gathering information from a significant number of participants beside often free from many types of measure errors Babbie (2008).

Yin (1984) defines the study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used. Since phenomena are essentially contemporary, it involves operating within specific contexts and thus, the case study method becomes more appropriate. Similarly, as Norgaard (1994) emphasizes that the case study research is the preferred one done when

control on the subjects of the study is neither feasible nor desirable. Surveys are appropriate for studies that are descriptive, explanatory, and exploratory Babbie (2001)

This study adopted a descriptive survey design, which involves qualitative and quantitative data. According to Mugenda and Mugenda (2003), descriptive survey design is a way of collecting information by interviewing or issuing questionnaires to sampled individuals. The survey design is preferred as it is used to explain the existing status of the two variables, that is, assessment of citizen participation in planning and development of water and sanitation project in Kaksingri location, Suba sub-county. Descriptive statistics was used to describe the sample, which is a group of individuals.

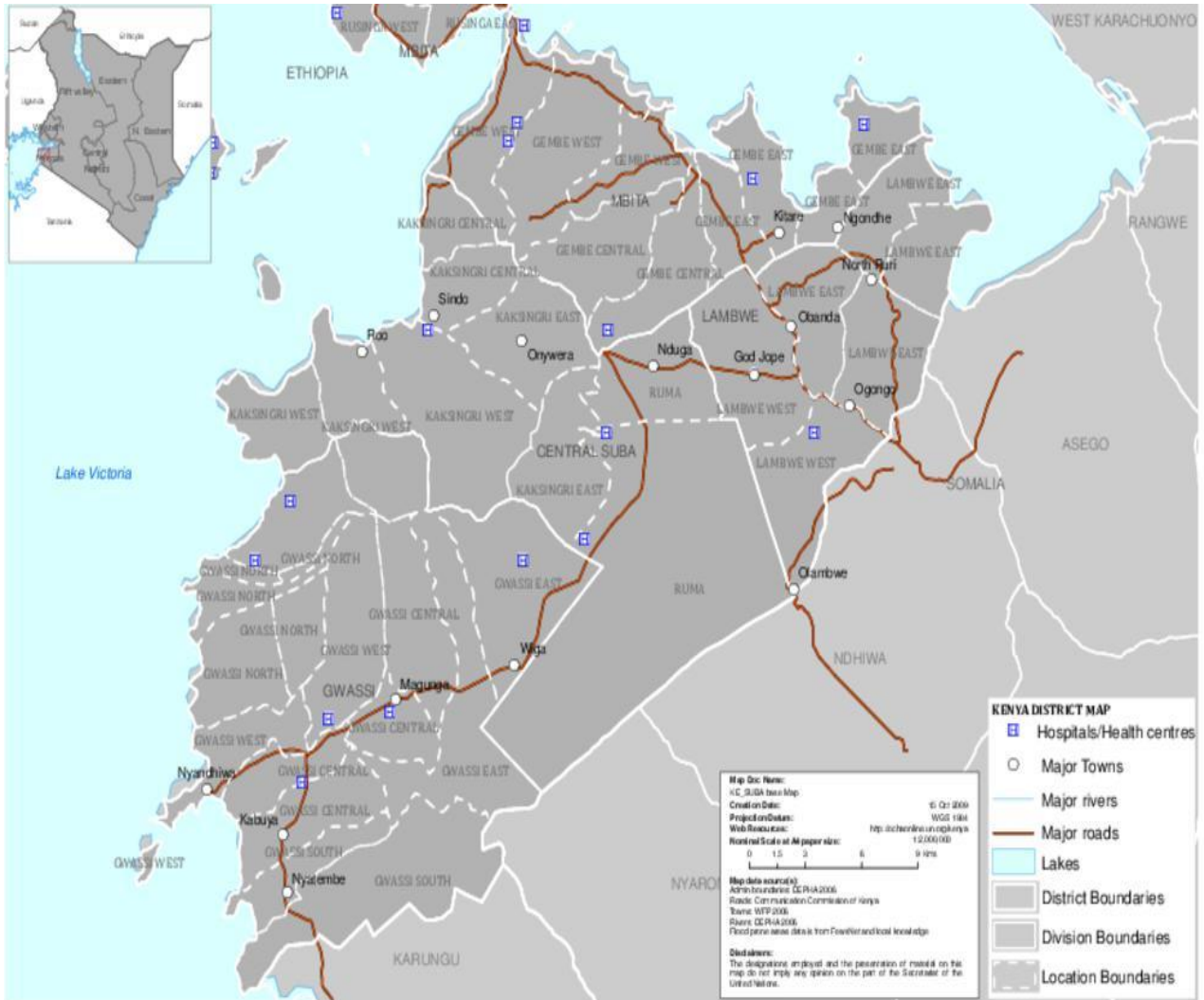
3.3 The study location

The study location was Kaksingri location, Suba sub-county. Suba Sub County lies between longitudes $33^{\circ} 2' W$ and $36^{\circ} 0' W$ and latitudes $0^{\circ} 13' S$ and $2^{\circ} S$. Kaksingri location is found in Suba Sub-County being one of the sub- county in Homa-bay County. The location is bordered by Gwasssi division to the west, Mfangano Division to the north and Mbita Sub-county to the south. Kaksingri location has a population of 14,670 persons; kaksingri west sub location has a total of 2,250 persons and covers a surface area of 234 Km. The main economic activity in the location is farming with a bias towards crop farming and livestock keeping at a subsistence level. The presence of Non-government organization has contributed to existence of projects like toilets, hospitals and even schools in the location.

Map showing study area in kenya



Map showing kaksingri location



The map of Suba showing Kaksingri location

3.4 Target population

The study targeted a total population of 2,250(Households) out of which 270 was sampled.

Community members consisted of 260 local members per household, 7 key informant persons, 3 local administrators (Kaksingri location 2014).

3.5 Sample size and sampling procedures

Stratified sampling technique was used to categorize the different levels of persons within the community. The simple random sampling was used to select community members to enable each and every one in the target population to have an equal chance of inclusion from the target populations of 270 households. This was to enable the study not miss any parameter that is vital to the research. The sample size of community members was determined by use of Kombo and Tromp (2006) recommendation that a sample size of 10% to 30% was representative enough for the study population. Therefore, the sample size of community members was determined on the basis of 10% to 30% recommended by Kombo and Tromp (2006): Number of the population: - $12/100 \times 2,250 = 270$ households (see Table 3.1). The 7 key informant persons and the 3 local administrators were selected using purposive sampling because this technique allows the researcher to use cases that have required information with respect to the objectives of the study (Mugenda and Mugenda, 2003).

Sample Frame

Strata	Population	Sample Size
Local administrators	9	3
Key informant persons	15	7
Households	2,226	260
Total	2,250	270

Source: District Development Office Suba

3.6 Research instrument

The study used both the questionnaire and interview schedules for data collection.

3.6.1 Household interviews

Questionnaires is useful instrument of collecting the primary data since the respondents can read and then give responses to each item and they can reach a large number of subjects Orodho (2004). Questionnaire was used to capture data from the community members. This instrument was used in the study because it was convenient to administer when handling a large group of respondents. They are confidential, save on time, no bias cover wide area Mugenda, Mugenda (2003). The questionnaire as an instrument used both closed ended and open ended questions in its structure.

3.6.2 Interview schedules for key informant and local administrators

Interview schedule is an interview with pre-coded question to produce quick, cheap and easy quantitative data which is high in reliability but low in validity Chitika (2012). The interview schedule was administered to the local administrators and key informant persons containing questions on the assessment of community participation in planning and development of water and sanitation project development at Kaksingri location. The interview schedules made it possible to obtain data required to meet specific objectives of the study (Mugenda and Mugenda (1999). It also helped to standardize the interview such that the interviewer can ask the same questions in the same manner. According to Drew, Hardman and Hart (1996), the advantage of the interview techniques is that it enables the participants to enlighten the researcher about unfamiliar aspects of the setting and situation.

According to Mugenda and Mugenda (2002) validity refers to the accuracy and meaningfulness of inferences made based on results obtained. It is asking a relevant question framed in the least way. White (2005) describes validity as the agreement between the

researcher's conclusion and the actual reality. The researcher adopted the content validity to measure the validity of the instruments to be used. Content validity enables data being collected to be reliable in representing the specific content of a particular concept. Borg and Gall (1985) points out that validity of an instrument is improved through expert judgment. Validity was also checked during piloting to ensure all the items in the main study are functioning. Moreover, to ensure validity of the instruments, content validity was established Cozby (1977) from the pretest and re-test method that was done before the actual research. The pre-test retest will be conducted in an area within the study location.

3.7.1 Reliability

According to Mugenda and Mugenda (1999), reliability of an instrument is a measure of the extent to which a research instrument yields consistent results or data after repeated trials in the study. The consistency of questionnaire was established through test re-test method where research tools were administered twice to the same people under identical conditions, this procedure revealed the questions that was vague that could lead to respondents interpreting them differently hence adjustments accordingly. Reliability measured the relevance and correctness of the instruments Mugenda and Mugenda (2002). After piloting, the internal consistence procedure was used to determine the reliability of the instruments. This was determined from scores obtained from a single test administered to a sample of subject.

3.8 Data collection procedure

First the data was collected through questionnaires coded manually and through interview schedules. The researcher then sought for a research permit and a research authorization

letter from the National Commission of Science, Technology and Innovation (NACOSTI) before embarking on data collection process as dictated by ethics. The instruments were then administered through personal visits to Kaksingri location. The questionnaire then was administered in the presence of the researcher after agreeing on the dates and then collected personally or using research assistants. The researcher then took time to explain any issues arising from the questionnaires.

3.9 Data analysis

Data was then organized under different variables and the frequency established. Percentages and the ratios were calculated to allow for the use of descriptive statistics. The results were then presented in the frequency tables, pie charts and bar graphs.

3.1.0 Ethical considerations

Data collection is a sensitive issue as it borders on invading people's private lives, ethical consideration are therefore, of paramount importance in research Mugenda and Mugenda (2003). The researcher therefore ensured that the respondents are made aware of the intended use of the data and that the information obtained remained confidential and not disclosed or discussed with any unauthorized persons. The researcher ensured that respondents are treated with utmost respect. Any data collected remained confidential. The researcher ensured no discrimination. The information collected was not pegged to a particular individual instead was treated with anonymity and privacy.

CHAPTER 4:FINDINGS AND ANALYSIS

4.1 Introduction

This chapter presents analysis and discussions of the data collected to address the three objectives of the study as stated in chapter one. Quantitative data were analyzed using SPSS and Microsoft Excel Spread Sheet. In most cases descriptive statistics were derived and shown in frequencies and percentages. Creswell (1998) states that data analysis is the process of moving from raw data to evidence-based interpretations that the foundation for published reports. Since numbers from quantitative information by themselves do not give adequate meaning, qualitative information which is relevant to the issue being studied was used to supplement them. There are different ways of analyzing qualitative data as argued by different authors such as Gill and Johnson, (2002). In this research content analysis was used for the qualitative data, where theory was compared to practice. Direct quotations were used to show what respondents said about the issue being analyzed, thereby supporting the statistical information.

he study sought to establish information on various aspects of respondents' background such as time of being a resident, gender, academic/professional qualification, occupation, and average income. This information aimed at testing the appropriateness of the respondent for the study.

The questionnaires were administered through personal visits to Kaksingri location, this was done in the presence of the researcher after agreeing on the dates and then collected

personally. The researcher then took time to explain any issues arising from the questionnaires.

A total of 260 questionnaires were duly filled and collected making 98% response rate. This acceptable rate could have been attributed to the fact that the questionnaires were physically dropped to the respondents and collected at an agreed date. The other questionnaires were not filled by the respondents simply because they were in a field related trip outside the town and the researcher has never seen them to-date. This constitute to a 2% of the non-response rate.

The response rate was as follows:

Response Rate

Category	Targeted Sample size	Response Rate	% Response rate
Household	260	260	100
Key informant persons	7	7	100
Local administrators	3	3	100
Total	270	270	100

Table 2: Response Rate

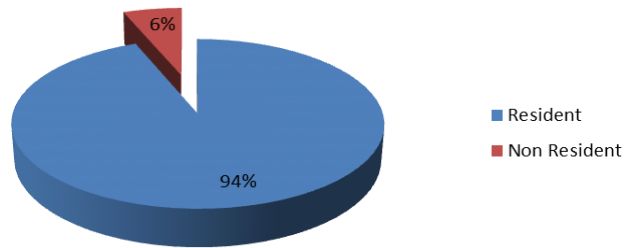


Fig 2: Place of residence of the respondents of the study.

The figure above clearly indicates that majority of the respondents at 94% live in Kakasing location with a 6% being non-residents.

The information presented in the bar graph below shows representation on the respondents of kaksingri location in relation to gender and age.

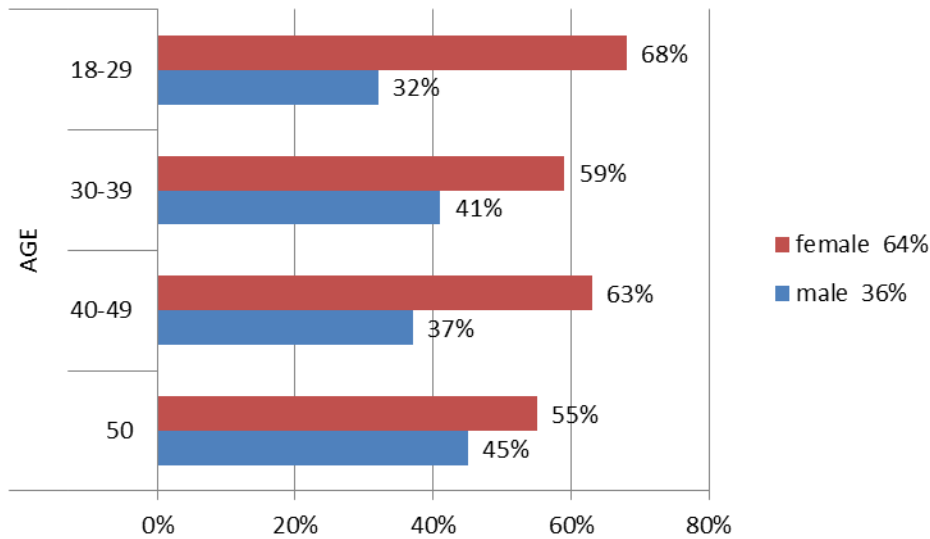


Fig 3 Respondents Gender and ages

Results in figure 4 above indicate that of all the respondents polled 64% of them were female while only 46% were male. It also shows that in all categories there were more female than

male respondents, as a matter of fact its only in the 50 years and above age bracket that the male were found to be close to half (45%).

SOCIO-ECONOMIC INFORMATION OF THE RESPONDENTS

Variable	Frequency	Percentage
Highest level of school		
Never	11	4.58
Primary	117	48.75
Secondary level	92	38.33
Tertiary level; (colleges, polytechnics	15	6.25
University level	5	2.08
Occupation		
Farmers	67	27.9%
Vegetable sale	40	16.7%
Cereals sale	32	13.3%
Firewood sale	27	11.3%
Fish sale	25	10.4%
Casual labour	28	11.7%
Formal employment	21	8.7%
Average income range per month		
Less than 2500	36	15%
2500 – 5000	124	51.66%
5000 – 7500	38	15.83%
7500 – 10000	27	11.25%
More than 10,000	15	6.25%

Table 3: Socio-Economic Information of the Respondents

Table 3 above indicates that most of the respondents were farmers therefore most of the people in the study area practice farming with average level of education. However most of the households had an average income of between five and ten thousand shillings.

4.2 Level of community participation at design of kiambai water and sanitation project

The first objective of the study was to examine the level of community participation in the design of Kiambai water and sanitation project. The following were the findings of the research.

The study inquired from the respondents on the main benefit associated with community participation in the project.

	Percentage
Strong ownership of the projects	53
Timely maintenance/repairs	51
Continuity of the project	44
Expansion of the project	42
Better service delivery	27
Harmony/conflict management	23

Table 4 Benefits associated with community participation

From the findings in Table 4 above, the majority of the household respondents (44%) indicated that the main benefit associated with community participation is that it will enhance assurance in the continuity of the project, 51% said it will enhance timely maintenance/repairs, 23% cited it as harmony/conflict management, 53% cited strong ownership of the projects, 27% said it was better service delivery while 42% cited expansion of the project.

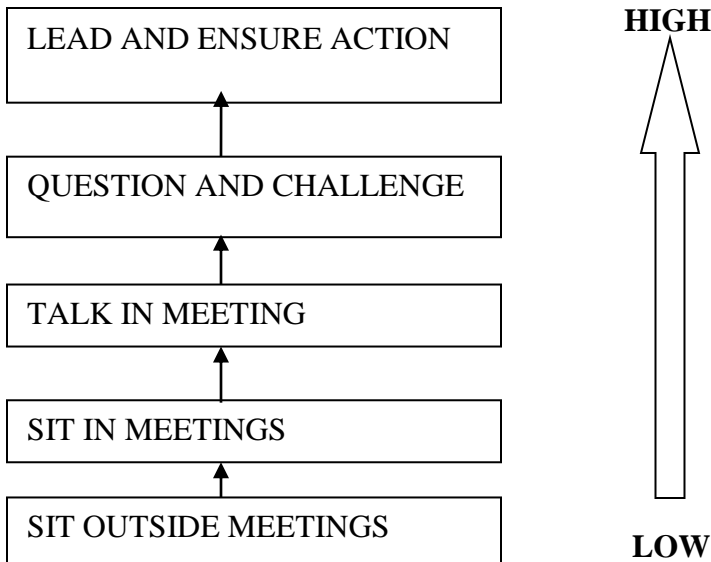
These findings are in line with the finding and opinions various researchers and scholars. Katz and Sara (1998) recognizes the fact that whenever the local communities participated

directly in planning their own water supply systems, these systems were more likely to be sustainable than systems that are unilaterally implemented by the government or donor organizations. The same opinion is also shared by Carter (1999) and Barnes & Ashbolt (2010). Montgomery, Bartram & Elimelech (2009) in their research, concluded that one of the main reasons for the high success rate of water projects that involved the citizens was the fact that, whenever the communities were engaged in the planning process then they were more likely to select supply options that they were willing and able to operate and maintain.

Table Levels of participation

Scales	PERCENTAGE
Very High	85-100
High	70-85
Moderate	50-70
Low	30-50
Very low	0-30

Hierarchy of community participation in rural water supply projects-adopted from World Health Organization (1996)



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The questionnaire questions included; Identification of the water project as a need, Sharing of the idea in the community, Taking decision to carry out the project/planning and choice of the location of the project

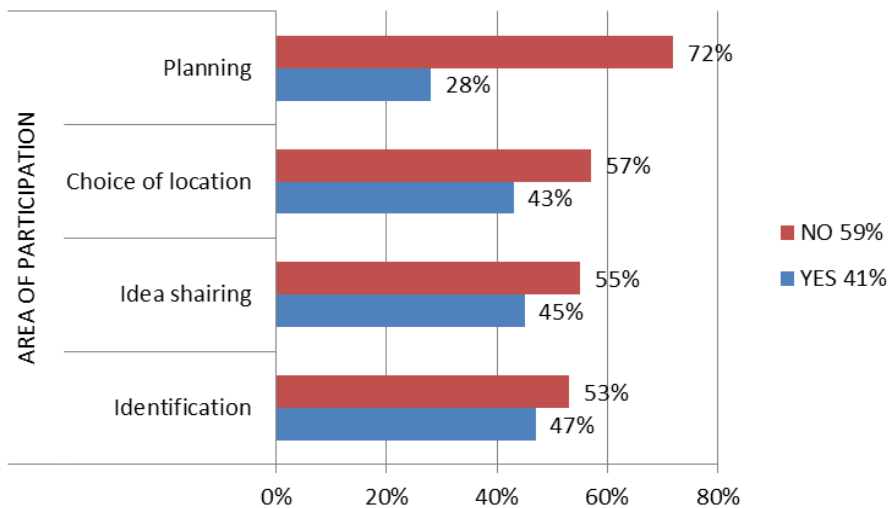


Fig 4: Community Participation at design stage

From the findings of the study in figure 4 above, a small majority (59%) of the respondents

were never involved in any aspect of the design of the Kiambai water and sanitation project.

However the remaining 41% confirmed having been involved in one way or another. Of those involved the highest area of participation was in the identification the water project as a need (45%) while the least area of participation was at the planning phase (28%).

These results concur with the finding of other researchers. Nayar and James (2010) in their research concluded that successful community participation extended beyond mere consultation. They asserted that at the very least, community participation should result in the community's shared understanding of water as a vital resource for its health and growth.

Katz and Sara (1998) opined that community participation ought to have been a dialogue with the community so as to explore ideas about infrastructure options, location of the project, service levels and other planning issues.

According to Thwala (2010) proper evaluation and understanding of community involvement can be better achieved when it is viewed against a theoretical framework built on decision-making. People's involvement in decision making leads to the sense of ownership of the project whose outcome is sustainability of the project.

4.3 Level of community participation in the implementation and management of kiambi water and sanitation project

The questionnaire questions included; financial contributions, Organization of fund raising, Project site clearing, Provision of labour, supply of needed materials and management of the project.

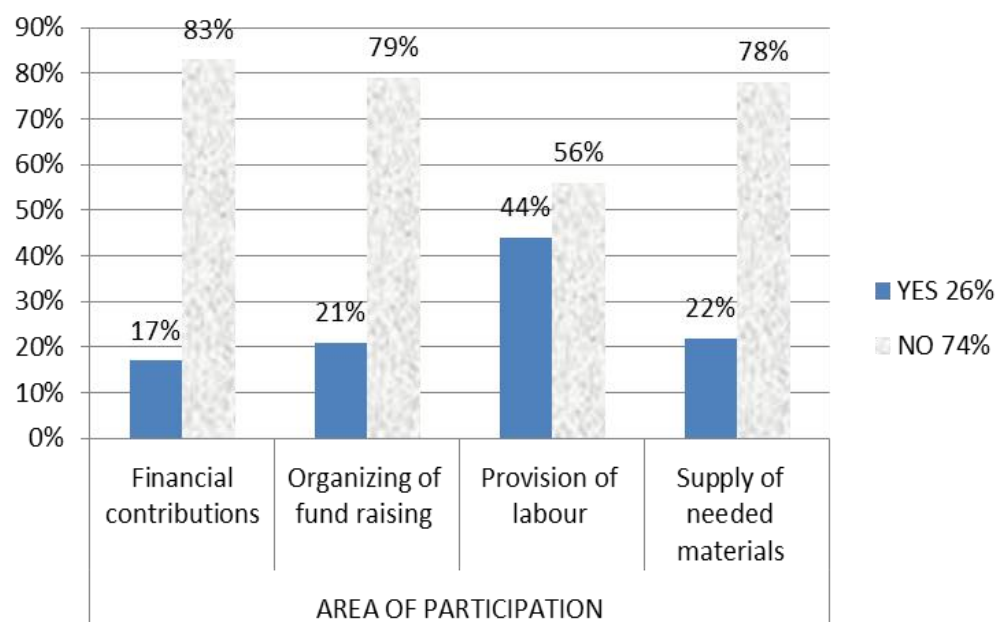


Fig 5: Community Participation at implementation Stage

From the findings of the study (fig 5) a large majority (74%) of the respondents were never involved in any aspect of the implementation of the Kiambai water and sanitation project.

However of the minority 26% who confirmed having been involved, the area that reported the highest level of participation was in the provision labour at 44%, followed by supply of needed materials and organization of fund raising at 22% and 21% respectively. The least area of participation was in the area of financial contribution (17%).

These findings concur with the study by EWAREMA (2008) indicates that communities can participate in project implementation by generating funds for spares if all are committed to water supply. This can be done through setting water tariffs and control mechanisms and by giving them opportunity to actively participate

Implementation is an important stage of the project cycle. The study by URT (2005) stipulates that various forms of community involvement and responsibility for rural water supply projects which have been implemented involving communities have led to the increased projects sustainability. Thus, intensifying community involvement in the implementation of rural water supply projects will increase the sustainability of investment.



Picture from the chiefs' office

Management is a crucial aspect in the implementation of water projects. Failure to form a good managerial structure becomes a starting point for the failure of the project and problem to meet its goals. The study expected to find out whether the project involves communities in management in order to ensure smooth implementation of the project. In managing water supply projects the involvement of the community is very essential to ensure maintenance of water supply equipments, effective revenue collection and effective mechanisms for active participation of all water users and other stake holders. The study was interested to understand whether there was community involvement in managing Kiambai Water project in the study area.

The questionnaire questions included; the extend of community participation in the running of the project, monitoring of the project, formulation of appropriate tariff structure, operation and maintenance.

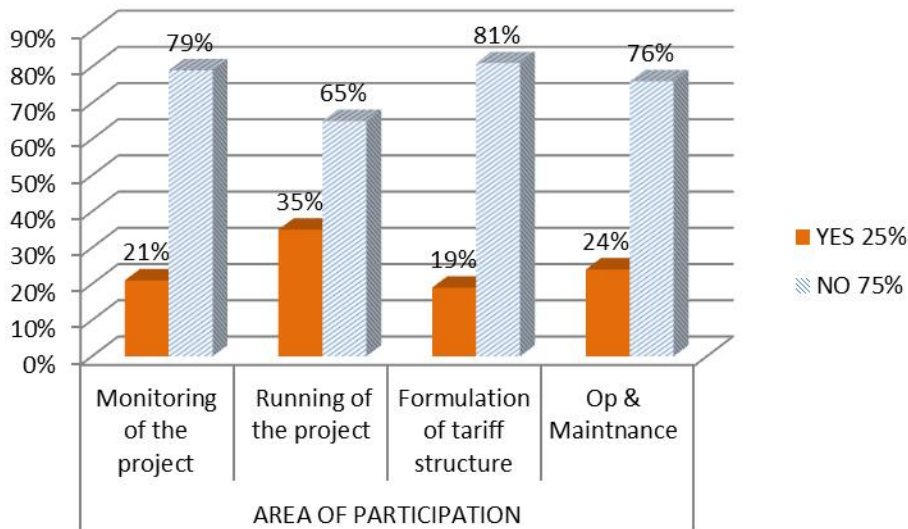


Fig 6: Citizens Participation at Management Stage

From the findings of the study (Fig 6) a large majority (75%) of the respondents were never involved in any aspect of the management of the Kiambai water and sanitation project.

However of the minority 25% who confirmed having been involved, the area that reported the highest level of participation was in the provision running of the project at 35%, followed by operation / maintenance and monitoring of the project at 24% and 21% respectively. The least area of participation was in the area of formulation of appropriate taffirs structure at (19%).

The findings conquer with EWAREMA (2009) that if the community has been mobilized and well empowered from initial stage, confidence gained help the community to minimize downtime. The confidence in community own resource persons have great relationship with sustainability of the system.

This is in line with the study by Odhiambo (2009) that the sustainability of rural water projects is greatly affected by low degree of community participation in establishing water system from technological selection to the supply and management arrangement.

Some of these studies conducted by World Bank (1995) showed that, community participation approach in managing several projects was applied for the sake of fastening development. For example in Yemen, World bank conducted a study in year 2004 which showed that FAO implemented hundred of projects over 23 years ago using participatory approaches including a number of large scale rural development projects. Yemen was considered to be an example of community participation in water management in 1990s

during the construction of small dams with donors support. It developed training activities to build their own management and technical capabilities.

It is believed that, the rolling-back of participatory approach in water service management will ensure sustainability. Many of conducted studies have suggested that where there is no community participation in water projects management the performance of water project is low hence less sustainability. Between 20-50 percent of all water projects in the world do not perform as designed (BNWP, 2009). Large amount of water projects failed just because of inadequate financial management (Annis, 2006). Another fail because of lack of routine repair (Reents, 2003).

4.3.1 Average level of community participation in the water & sanitation project

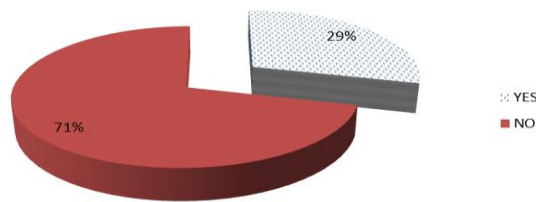


Fig 7: Average Level of community participation in the Kiambai water and sanitation Project

From the findings of the study (fig 7) a very large majority (71%) of the respondents were never consulted at any stage in the design, implementation and management of the Kiambai water and sanitation Project. Of the 29% who were involved 21%, 41% and 25% of them were involved in the design, implementation and management of the Kiambai water and sanitation Project.

According to the GWP (2000 15) “Real participation only takes place when stakeholders are part of the decision-making process. This can occur directly when local communities come together to make supply, management and use choices” or occasionally through market places with the use of appropriate pricing systems.

4.4 The challenges to the sustainability of kiambai water and sanitation project

In this project sustainability has been defined as the maintenance of an acceptable level of services throughout the life of the water supply system. In-order to clearly identify the challenges facing this water project, the researcher structured the questionnaire in such a way as to capture the respondent’s views on the following **THREE** main indicators of sustainability:

- i) Technical aspects
 - Physical condition
- ii) Institutional aspects
 - Operations and maintenance
 - Financial management
- iii) Social aspects
 - Consumer satisfaction
 - Willingness-to-sustain

The questionnaire questions were structured to interrogate the physical condition of the water system and included; whether the water system was working or not, what were the sources of breakdowns, whether those breakdowns were being repaired and if there were any serious defects in the construction of the water and sanitation system.

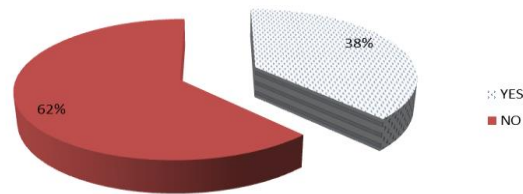


Fig 8: Working condition of the water system

From the findings of the study (fig 8) a very large majority (62%) of the respondents believed that the water project was not functional and there was no benefit received from the project because it was totally dilapidated.

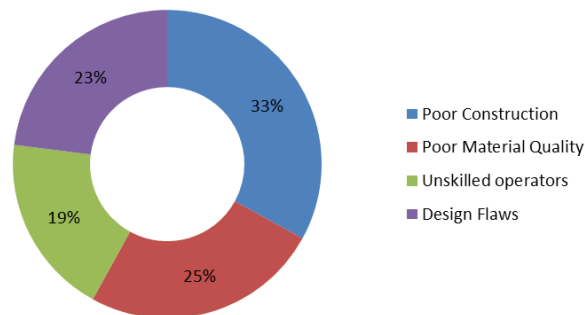


Fig 9: Common Sources of breakdown

The respondents identified poor construction (33%) as the main cause of failure closely followed by poor material quality, design flaws and unskilled operators at 25%, 23% and 19% respectively.

Operations and maintenance of kiambai water and sanitation project

The questionnaire questions included; whether there were people appointed to manage the water system, whether those employees were paid, the competence and training of the operators, the number of times the system had broken down in the previous year and the number of days taken to restore the water system.

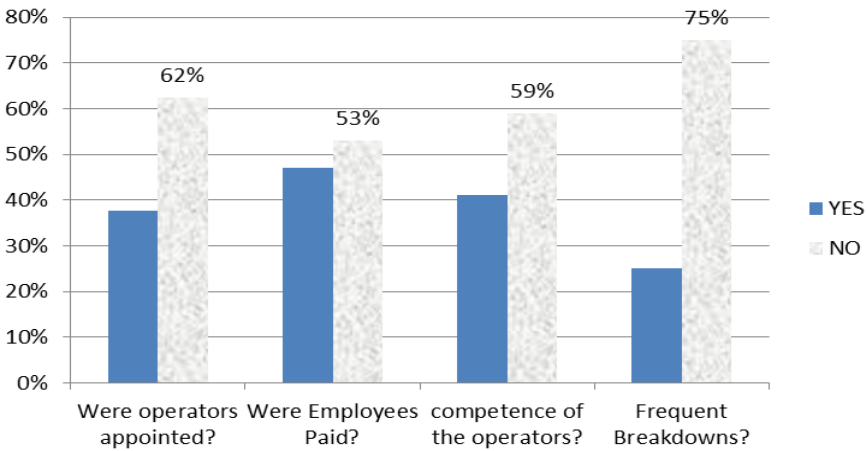


Fig 10: Operations and maintenance of Kiambai Water and sanitation project

From the findings of the study (fig 10) a majority (75%) of the respondents confirmed that there were frequent breakdown of the water project. The findings also indicated that most of the operators were not appointed (62%), were not competent (59%) and only about half of them (47%) were remunerated.



The latest picture of the water project

The development literature suggests that greater amounts of participation by all members of society, including marginalized groups such as minority ethnic groups, the poor, landless, illiterate or women, will have a positive effect on project success (see, for example, Oakley, 1991; Uphoff , 1998). In the rural water and sanitation sector, the role that women need to play in projects is emphasized; primarily due to gender roles at the village level (see, for example, van Wijk-Sijbesma, 1998; World Bank, 1996b).

Many case studies have provided evidence that suggests women's participation is an important component of project success (see, for example, van Wijk-Sijbesma, 1998; Water and Sanitation for Health Project, 1993). As a result of this, international institutions such as the World Bank and the United Nations have advocated for more women's participation in

water supply projects for years. However, despite higher level policies and objectives, in large scale rural projects women's participation rarely becomes a reality

It is believed that participation should ensure success because, as people are involved in project planning and implementation, the project should better meet their needs and they will develop a sense of ownership. This leads them to oversee construction and then take care of the facilities to ensure their sustainability Tacconi & Tisdell, (1992); Water and Sanitation for Health Project (1993); Narayan (1995).

Women in villages often have the primary responsibility for water management. They collect water for a whole array of household purposes (Boesveld & Postel-Coster (1991); Rodda (1991); van WijkSijbesma (1998). Due to these roles, women can have different views from men on issues such as what hours they need water and where facilities should ideally be located. There are many examples in the literature of cases where women were not consulted and the resulting projects had serious flaws; for example, handpumps being built that were too heavy for women to use (Dankelman & Davidson (1988); INSTRAW-UN (1990).

It is suggested that, when women participate, the projects have benefited in ways ranging from the identification of reliable water sources, to reductions in construction costs, adaptation of equipment for better use and long-term sustainability Briscoe & de Ferranti (1988); World Health Organization (1988); INSTRAW-UN (1990); Water and Sanitation for Health Project (1993); van Wijk-Sijbesma (1998).

Financial management of kiambai water and sanitation project

The questionnaire questions included; the percentage of the water system users current with their tariff payment, whether the service was ever disconnected for non-payment, the

capability to finance major repairs, whether the current tariffs were enough to cover maintenance of the system and whether the tariffs could be adjusted to meet the costs

	Yes %
Water users with their tariff payment arrears,	58
Water disconnected for non-payment?	60
Capability to finance major repairs,	30
Current tariffs were enough to cover maintenance costs	42
Can the tariffs be adjusted to meet the costs	25

Table 5 Financial management of Kiambai Water and sanitation project

From the research findings (Table 5) a majority of system users (58%) had problems paying their water bills, (60%) have had a disconnection for non-payments, the tariffs appear not to be enough to finance major repairs (30%) or even cover maintenance costs (42%). The findings also indicate that it's not easy to adjust the tariffs so as to meet maintenance cost (25%)



The latest picture of the water and sanitation project

The Kiamba water and sanitation project is now a well as it can be seen in the above picture, this had been contributed to the breakdown and lack of repair and maintenance

Following the inter-linkages for water project progress, it has been established that a beneficiary participation in any water project provides the most important factor that leads to effectiveness of a project. Narayan (1994). Lack of sense of ownership results in neglect or abandoning of maintenance services and repair of some pumps Parry- Jones (2001).

It's this reason that UN in the 1980s (the International Drinking Water Supply and Sanitation Decade) called for the “full participation of women in the planning, implementation and application of technology for water supply projects” UNICEF & INSTRAW-UN (1985). This sentiment has been re-echoed several times since then, including at the influential World Water Forum held in The Hague in 2000

Consumer satisfaction with water and sanitation project

The questionnaire questions sought to find out whether the respondent was satisfied with the job performed by the organization in charge of providing water, satisfied with the water quality, water pressure, water flavor and taste

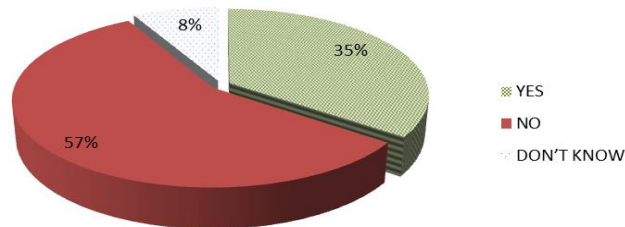


Fig 11 Consumer satisfaction with Kiambai Water project

Majority of the respondents (57%) were not satisfied by the services offered by Kiambai Water project while only 8% said they were not sure.

The questionnaire questions included; to whom does the water system belong, whether the community have the financial capacity to keep the system working for over the next 10 years, the respondents knowledge of the tariff charged, any difficulty in making monthly payments and willingness to pay more than the current rate for improved service,

Majority of the respondents (54%) expressed their willingness to sustain the project. however 42% were unwilling. 4% dint know.

The results of the research are rather alarming because according to Harvey & Reed, (2004) technical, administrative, and financial capacities are necessary to ensure a system operates effectively over time and at a reasonable cost, these are important criteria for sustainable rural water supply systems. Katz & Sara (1998) found out that whereas technical capacity depended on the people to be trained to operate equipment and the quality of construction of the

system, sustainability of a water system was more likely to be found where communities and project operators had adequate administrative and financial capacity for system operations and maintenance. Montgomery et al (2009) also came to a similar conclusion.

CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter presents observation, conclusion basing on research questions and finally presents a conclusion and recommendations. The purpose of this study was to assess the citizen participation in planning and development of water and sanitation project.

5.2 Findings

The first objective of the study was to examine the level of community participation in the design of Kiambai Water and Sanitation Project. The majority of the respondents were aware of the benefits that could be realized from the project if they were fully involved. The benefits associated with citizen participation were identified as an assurance of the continuity of the project, timely maintenance/repairs, harmony/conflict management, strong sense of ownership of the projects, better service delivery and expansion of the project. To achieve this several questions were on the role of the respondents on the identification of the water project as a need, Sharing of the water project idea in the community, Taking decision to carry out the project/planning and choice of the location of the project were asked.

The second objective of the study was to examine the level of community participation in the implementation and management of Kiambai water and sanitation project.

To achieve this several questions were on the role of the respondents on whether they were capacity build on the water project before implementation was done. The researcher also made

inquiries on roles played in the financial contributions, Organization of fund raising, Project site clearing, Provision of labour and supply of needed materials. At the management phase the researcher sought to find out extend of community participation in the running, monitoring, and formulation of appropriate tariff structure, operation and maintenance of the project.

Though consultations were found to have been made, it was minimal and therefore the citizens were not given enough opportunity to impact meaningfully on the water and sanitation project.

The third objective of the study was to examine the challenges facing the sustainability of Kiambai Water and Sanitation Project. In-order to clearly identify the challenges facing this water project, the researcher identified three main indicators of sustainability (social aspects, institutional aspects and technical aspects). The results indicated that the clients were not satisfied by the services offered by the water project.

Questions were structured so as to interrogate the physical condition of the water system and included; whether the water system was working or not, what were the sources of breakdowns, whether those breakdowns were being repaired and if there were any serious defects in the construction of the water and sanitation system. Other questions touched on the Operations and maintenance of Kiambai Water and sanitation project, financial management, Consumer satisfaction and the willingness to of the respondents to sustain the Kiambai Water and sanitation project

The respondents identified poor material quality, design flaws and unskilled operators as the main cause of failure of Kiambai Water and sanitation project

On Institutional sustainability the respondents confirmed that there were frequent breakdown of the water project, most of the operators were neither appointed nor trained. It also discovered that only about half of them were remunerated for the services they offered.

On Financial management of the project a majority of system users had problems paying their water bills and had even been disconnected for non-payments. To make matters worse the tariffs were neither enough to finance the overall repairs and maintenance costs. The research also found out that it was practically impossible to adjust the tariffs so as ensure sustainability of the project.

5.3 Conclusions

The research findings revealed that the failure of Kiambai Water and sanitation project was due to ineffective participation of key stakeholders in design, implementation, management and sustainability strategies, low capacity of the communities in operation and maintenance of water system and management of water resources. Moreover the research revealed that demand responsive projects were more sustained than supply driven projects.

These findings are consistent with the results of other studies and the literature review undertaken. Similarly NWP (2002) emphasizes demand responsive elements in order to realize sustainability of water projects. Additionally, NWP insists on hygiene education and environmental sanitation in the implementation of water projects and that in order for the community to function as legal owners of water projects, should form legal entities to manage the water resources was necessary National Water Policy (2002).

Participation must take place in all stages of implementation of the water scheme, from the initiation to planning stage, to implementation, management and monitoring. “Suggested, that all programmes should demonstrate a highly proficient concerning people participation. That would be unrealistic. Rather what is needed is to ensure that water supply programmes are seriously feeling their way towards such participation” Colin and Mog Ball (1991)

Community Participation contributes to all important enabling environments that community requires in order to function. Eventually, the responsibilities of the community should be present at every stage of the project implementation. In this way the community assumes **responsibility, authority and control** over its own development McCommon (1990).

From this study it can be concluded that little attention was given to the community at different stages of projects implementation. Hence there was ineffective and limited Citizen Participation. Community participation is a vital important strategy in efforts to work with community to improve their community economic development. It respects the rights and ability of indigenous and other community member to design, implement and manage programs within their community. It also opens the way for community members to act responsibly. Whether a participatory approach is the primary strategy or a complementary one, it will greatly enrich and strengthen programs and help achieve more sustainable, appropriate, and effective programs in the field. For real Community Economic Development calls for active citizen involvement in a development process which brings together a diversity of community interests and sectors. The central of CED according to Douglas (1994) is to develop the competency of the community to deal with its own problems. Real participation is an essential ingredient to building community

competency.

5.4 Recommendations

The following recommendations were drawn from the findings of the study:

Little attention was given to the community involvement in different stages of projects implementation. Hence Community Participation management approach was ineffective in the study water project. Dissemination of information, community member's involvement in all stages of water project implementation and use of local knowledge in implementation of water and sanitation projects could be taken into considerations, as this would make the project more sustainable.

Each Community Participation aspect (WC, public meeting, election of Water Committee member, water tariffs etc) should be looked on individually and a suitable pro-poor, affordable and sustainable solution should be found to fit the community needs. The decision making processes should be transparent and consultative, involving all key stakeholders, to determine how these services will be provided and managed to the standards expected. Similarly NWP (2002) emphasizes on this point in order to realize sustainability of community managed water projects.

For a successful community participation requires a strong skilled local leadership through a process of leadership development, community mobilization, capacity building, education, and consciousness raising on how to organize communities that encompass such skills as chairing meetings, negotiating with government and NGOs institutions, fundraising and handling budget, another aspect to be fully involved is of marginalized groups such as women, youths, old and

poor class is an important part of community holistic development. This will in the long run contribute to the community members saying, we did it ourselves.

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APPENDICES

Appendix 1: Letter of introduction

October 2014.

Dear Respondent:

I am a postgraduate student undertaking Degree of Master of Project Planning and Management of Maseno University. I am carrying out a study on the **“Assessment of community participation in design, implementation and management of Kiambai water and sanitation project: Kaksingri location, Kenya.”** I will use the attached questionnaire and interview schedule to collect information for the study. It is my kind request that you fill the questionnaire and respond appropriately to questions providing the relevant information to facilitate the study. Please use the space provided to fill in the information required as objectively and honestly as possible. The information provided will be treated with strict confidentiality for the purpose of this study only.

Thank you.

Yours faithfully,

TERESA ACHIENG OTIENO

PG/PA/6002/2013

Appendix 2: Questionnaire for community members

A. Personal Particulars

Name.....

Sex.....

Ward.....

Mtaa/Village.....

Education
Level.....

Occupation.....

Phone and/or Mobile.....

Email.....

A. GENERAL QUESTIONS

Do you know that CDF supported and/or supporting water project?

Yes ()

No ()

Was water a first priority among other social problems?

Yes ()

No ()

- I. To what extent water was the problem in this area?.....
- II. What do you think motivated CDF to implement this water and/or
- III. sanitation service project in your area?.....
- IV. What benefits are associated with community participation?.....
- V. How were the community involved in the design of the Kiambai Water and Sanitation Project?.....
- VI. Was there any capacity building before the implementation of the project?

- VII. If yes how was it done?
- VIII. What types of material were contributed by the community towards the water project?
- IX. Is the water system functioning?
- X. What factors contributed to its breakdown?
- XI. What were sources of breakdown?

A. IMPLEMENTATION OF THE WATER PROJECT

- 5. Did you participate in the stages of project planning?
 - (a) Yes ()
 - (b) No ()

- I. Which specific areas did you participate in?
- II. How did you participate?

- 6. Forced to participate?
 - (a) Yes ()
 - (b) No ()

If yes, how were you forced to participate?

- 7. What was the community contribution in the project implementation?
 - (a) Labour ()
 - (b) Cash ()
 - (c) Both ()

Any other contribution other than above?-----

How were the contributions determined?.....

- 8. If cash how much per household?
 - (a) 500/= ()
 - (b) 1,000/= ()
 - (c) 5,000/= (), if more or less State.....

B. Management of the water project

- 9. Is there a water project committee?
 - (a) Yes ()
 - (b) No ()

10. How many members in terms of sex?

Women []

Men []

11. Which ways and/or method used to choose the committee members?

(a) Through democratic election ()

(b) Nominated and/or appointed ()

(c) None of the above ()

I. What were the criteria of selection of project committee?

II. How was the community members involved in the selection?

12. What were the responsibilities of the Community water Project Committee?

.....

13. Does the Committee still working effectively?

(a) Yes ()

(b) No ()

(c) No idea ()

If not, why are they not functioning effectively

14. Who were responsible in handling project resources (money, tapes?
channels, dams etc)

(a) Donor ()

(b) Community ()

(c) Mtaa/Village government/water committee leaders ()

Any other category not listed above.....?

15. Where the project money kept?

(a) Bank ()

(b) In the Village safe ()

(d) Home of one of the project leader ()

(e) No idea ()

I. How frequent were the transaction?.....

II. Who were the signatories, that is if they money was kept in the bank?.....

III. Was there a plan for the money collected?.....

IV. If yes how was it being used?.....

16. Do you know the cost of the project?

(a) Yes ()

(b) No ()

I. If yes, what was the cost?.....

II. If No, why don't you know the cost of the project?.....

17. Are you aware of the project budget?

- (a) Yes ()
- (b) No ()

18. Who was responsible with the project budget?

- (a) CDF()
- (b) Community ()
- (c) Water committee ()
- (d) None of the above (), Please mention.....

19. Who did the procurement of project required materials?

- (a) Water committee ()
- (b) CDF and/or other donors ()
- (c) Established procurement unit ()
- (d) No idea (), any remarks on this.....?

How were the procurement done?.....

Was there a procurement committee?.....

How was the selection done?.....

20. Were there any community meetings?

- (a) Yes ()
- (b) No ()

I. What kind of meetings were they?.....

II. Which kind of people were involved in the meeting?.....

III. How occasional were the meeting?.....

IV. What were factors being discussed during the meeting?.....

V. How did you contribute towards the meeting?.....

21. What were discussed in those meetings?

- (a) Water Project issues ()
- (b) Non Water issue (), Please mention.....

22. Are you still participating in such meetings?

- (a) Yes ()
- (b) No ()

23. Is every one free air his/her views in the meeting?

- (a) Yes ()
- (b) No ()

24. Is everyone in the community contributing to the public meetings?
discussion?

- (a) Yes ()
- (b) No ()

25. Are opinions of every one heard and respected?

- (a) Yes ()
- (b) No ()

26. Who had the final say in the public meeting.....

C. Sustainability Issues

27. Is the quantity of water the same as the time project started?

- (a) Yes ()
- (b) No ()

28. Who is monitoring the project after the donor phase out?

- (a) The community ()
- (b) Mtaa/ Village government ()
- (c) Municipal/District/town councils ()
- (d) Central government ()

29. Do you have the capacity to maintain this project especially after sponsors?
or donors phase out?

- (a) Yes ()
- (b) No ()

30. If you do not have the capacity where do you get assistance in case there is break down of
the system.....

31. (i) Does the community contribute any user fees to cover operations and maintenance
services?

- a) Yes ()
- b) No ()

If yes how much

(ii) Do all people contribute the same amount?

- (a) Yes ()
- (b) No ()

32. Is the amount collected enough to cover the operations and maintenance
services?

- (a) Yes ()
- (b) No ()

If No please state why?.....

33. If not where do you get extra money to cover the operations and maintenance

of the system

34. Are there any problems encountered in participation of the community?

(a) Yes ()

(b) No ()

If yes what are those problems?.....

What determines sustainability of a water project?

35. Do you think community participated in planning, implementation and management of water project leads to the effective and sustainable of water and sanitation services?

(a) Yes ()

(b) No ()

How does community participation in the design, implementation and management leads to effectiveness and sustainability of water and sanitation project?.....

Thank you.

Appendix 3: Interview schedule for key informant and L.A

Interview Question guideline for Key informant and Local administrators

INTERVIEW QUESTIONS

An overview about the project.

- 1) How many water projects are in kaksingri location?
- 2) Out of these projects how many are completed?
- 3) How the communities did come about selecting a water project to be supported by CDF?
- 4) What is the role of the community in planning stage at the village level?

Participation in the implementation of the project activities.

- 5) To your understanding what does it mean by community participation?
- 6) What steps have been taken by the funding agency to make sure that the project is understood, accepted and institutionalized, given the experiences of people about mistrust of some government and other development agencies officials?
- 7) What communication methodologies are employed to communicate with the people during all stages of the project implementation?
- 8) How does community participate in the planning processes?
- 9) Are there enough resources to facilitate participatory planning?
Explain.
- 10) How long does it take to put the people into discussion given their low level of understanding?
- 11) Are there any problems associated with community participatory planning? If any, mention them.

Management of Project

- 12) Who manage the project funds?
- 13) Is there any Bank account?
- 14) Who are the Bank signatories? Who select them and what are the Selection criteria?

Sustainability of the project

- 15) Was sustainability of the project adequately addressed during the designing stage of the project? How?
- 16) What strategies in place to ensure sustainability of the project?
- 17) Do you think participatory approach alone leads to sustainability of water project? Give reasons.
- 18) What do you think are the other important factors to achieve Sustainability of project?

19) Are there any resources set aside to monitor the project Performance after the expiry of funding period?

20) Is there any capacity building /training done to the community/ project leaders to enable them sustains project interventions?

What kind of training and who were involved?

21) Do you think the community have been empowered enough to carry on the project activities? Give reasons.

22) Why some of the development projects fail after the expiry period of funding?

Thank you.