FACTORS INFLUENCING SUSTAINABILITY OF DONOR FUNDED WATER PROJECTS IN MACHAKOS COUNTY KENYA

BY

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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I do hereby confirm that I have examined the master's dissertation of Helena **Ndinda Kilonzo** and have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed

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DEDICATION

I am grateful to my dear family that has always stood by me in all the circumstances. Their cheerful support has always been giving me energy to soldier on even in the midst of difficulties.

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ABSTRACT

Sustainability is a strategy by which an organization ensures that there is continued growth and development strategy that continues to operate in the unforeseeable future. The strategies must be good such that they should consider advocacy, good leadership, enhanced management and good governance. Donors contribute significantly in processes of development worldwide and play critical roles where there is scarcity in state funds. Globally donor funded projects carry out different activities and programs at different levels. The differences in views and thoughts of the past research indicate presence of information asymmetry on factors that contribute to sustainability of donor funded projects. Though a lot has been done to address the recurring phenomenon of monitoring and evaluation challenges, stakeholder perspective in respect to donor funded projects, the problem is notably still pervasive, requiring further investigations on the community involvement in donor funded projects especially in Machakos County where we have approximately 20 donor funded projects. The study focused on 100 employees from donor funded projects in Machakos County with a sample of 93 and the researcher heavily relied on primary data which was analyzed using SPSS. Data was analyzed using correlation and regression analysis. Presentation of data was done using charts, frequency distribution tables, and bar charts. The study established that community and stakeholder involvement in donor funded projects will promote lead to success of such projects. The study revealed that failure to embrace stakeholder training and learning culture contributed to low stakeholders' participation in monitoring and evaluation of water projects. The study revealed that attitude of the community affects sustainability of water projects in Machakos County and the community members have the willingness to conserve the project area and that they willingly also provide suggestions and opinions to better the project. Collective measures should be taken to deal with persons vandalizing the community water

project. This should be coupled with improved security offered by the security agencies to mitigate the cases of vandalism. The study recommends that a similar study be carried out in other regional water authorities in the country to establish the sustainability of donor funded project

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CHAPTER ONE

INTRODUCTION

1.1: Background of the study

In 2015, the goal of the Millennium development was to reduce the percentage of population that has no access to drinking water and basic sanitation by at least 50%.It appears that this goal is yet to be achieved. Present statistics indicate that at least 2.8 billion people representing more than 40% of the world's population still face problems of inadequate water resources while about 1.6 billion people have access to water but face other challenges such as financial capital challenges in addition to human and institutional challenges. (UN, 2010)

In Kenya, present statistics indicate that about 49% of the population living in rural areas have adequate water resources in comparison to about 83% of the population living in the urban areas.(GoK,2012).This discrepancy is as high as 96% in Nairobi and as low as 14% in Mwingi district. The international water scarcity ratio threshold is believed to be 1000m^3.Kenya's threshold falls below the international benchmark and is only 953m^3 available per individual annual consumption. (FAO,2012).There are increased efforts to ensure that the future water scarcity ratio is reduced to 359m^3 by 2020(UN-water,2010)

African convention of nature and natural resources (1969) adopted sustainable development that seeks to protect natural and human resources in a way that fulfills present and future needs. United Nations (1979) adopted a report duped" our common future" that argues that integration, care and concern of present and future needs is paramount in pursuit of a mission to have a safe world. The report laid a solid foundation in developing and implementation of policy framework that seeks to

attain sustainable development. Consequently, most of governments have adopted sustainable development agenda in bid to protect their environmental resources and human capital. This is achieved by adopting ethical leadership and governance, free advocacy and accountable management of resources (Dorothy, 2007).

Sustainability is a strategy by which an organization ensures that there is continued growth and development strategy that continues to operate in the unforeseeable future. The strategies must be good such that they should consider advocacy, good leadership, enhanced management and good governance. Donors contribute significantly in processes of development worldwide and play critical roles where there is scarcity in state funds. Globally donor funded projects carry out different activities and programs at different levels .These activities are meant to improve the wellbeing of the less privileged in the society. (Dorothy, 2007).

Donor agencies such as NGOs such as United Nations Education, Science and Cultural Organization(UNESCO), Faith-Based Organizations (FBOs), United Nations Children's Fund (UNICEF) , World Food Programmed (WFP), United Nations Environmental Programme (UNEP), Food for the Hungary International(FHI), Red Cross International project (RCI), Pastoral Initiative (PISP) and Community-Based Organizations (CBOs) have in the past provided important services to the less fortunate and in the process strengthened families and societies lives.(Vidal ,2001)

FBOs and CBOs are often located in regions and neighborhoods where especially needy populations live. These organizations tend to have scarce resources, yet tend to make large contributions to society. Conceptually, development projects undertaken by donor agencies are "asset building" that improves the quality of life among residents of low to- moderate-income communities (Vidal, 2001).

Poverty eradication strategy coupled with sustainable development agenda remains foremost world goal. Developing countries seek to finance their projects through floating of treasury bonds in internal or external markets, loans from international financial institutions and local bank loans. The study focuses on donor funding which is in form of grant from external governments and cooperates to provide services and goods to societies at a price below market price. The main aim of donor funding is to eradicate poverty and develop human capital for sustainable development.

Donor aid effectiveness and sustainability of its objectives lies primarily in adoption of transparent and accountable leadership that seeks to diffuse information on cost-benefit analysis to the community. Acharya (2003) postulates that MDG's must work in collaboration with the community for effectiveness and efficiency in mitigation of conflict since donor projects are not immune from politicization. The goal of donor is primarily to eradicate poverty directly or indirectly without altering normal basic social structure of society especially the culture.

Government or non-government agency generated donors are done through bilateral or multi-lateral agreement between developing countries and the source country. Donor funded projects ranges from health, food and water projects. Many donors have implemented various projects ranging from water to health projects in the county.

A key determinant of project sustainability is the ability of the project to be viable enough to catch the attention for financial support. For Donors and governments in sub-Saharan Africa who fund these projects, sustainability has remained to be a great challenge. For a long time, development of the projects was believed to mean how sustainable the project was. This has since changed and according to Burmgardener, development is taken to mean the ability to build institutions that facilitate support, strengthen and advocate for innovation.

Understanding sustainability leads to setting the parameters for its measurement and pointing out factors, which may contribute to or work against the success of sustainability. One of the

challenges of quantifying sustainability without bias is the fact that the word is merely a claim that cannot be substantiated and is subject to bias. (Hodgkins, 1994).

This therefore shows that in Machakos, different persons or groups like the Community, the Government, the donors, and the private institutions and research institutions all measure sustainability to be the true value of meeting the specific goals. This is in line with USAID Development Assistance Committee which defines sustainability as the ‘’ultimate test of development efforts’’ (USAID 1988: OECD 1989).

Where a project is donor funded, the discontinuation in providing funds determines the life of a project.External donors through NGOs fund most donor-funded projects in Kenya. Research by Nyaguthii and Oyugi (2013), on influence of community participation on the implementation of Constituency Development Fund (water) projects in Mwea constituency reveals that there is little participation by community members in the process of identifying, implementing, evaluation and monitoring. Accordingly, there is need to improve such areas of concern. It is almost impossible to achieve sustainability without the involvement and support of stakeholders. To provide direction during the implementation of a project, stakeholders must be actively involved.

1.2 Statement of the problem

The Kenya Integrated Household Budget Survey KIHBS (2016), shows that 36% of the total Kenya population is absolutely poor (below poverty line) while 39% of the rural population is extremely poor (Kenya National Bureau of Statistics, 2018).This poverty level and the fact that the state has not been able to fully meet its social responsibilities over its citizens have created a situation where donor funding has been valuable in community development.

Donor agencies play a key role in developing life changing projects in developing countries which is of great importance and cannot be ignored (Mugambi, 2016). The main objective of donors is

to help improve the living standards of local communities either by participating directly or provides finds which are used to supplement the budget allocation of the government. In terms of sustainability, it is critical to have an effective strategy does not only look at the donor funding if the project, but also the means to continue operations after withdrawal of the funder (Young and Hampshire, 2000).

One of the recent developments in the drive towards sustainability stresses on cost recovery, community mobilization and education (Thematic Group, 2015). To enhance sustainability, donors have also embarked on ambitious projects aiming to provide funding in kind such as; capacity building for beneficiaries, training for staff for donor agencies, providing technical assistance and expertise in agricultural projects as well as sponsoring students in foreign countries through exchange programs to learn new innovations that are crucial for sustainability of projects. However, inspite of the various initiatives to enhance sustainability of donor funded projects, a great number of them fail when donors exit the project. Nearly one in two people in rural Kenya are poor compared to only three in ten in urban Kenya and given that close to 70% of Kenyans live in rural areas, poverty is still more of a rural phenomenon (Kenya National Bureau of Statistics, 2017).

According to the World Bank, Dongier et al (2003) perceives community development through donor aid as a vehicle for improving efficiency and effectiveness, enhancing sustainability, allowing poverty reduction efforts to be undertaken, and making development more inclusive and empowering the poor. However, a study by Busiinge (2008) conducted in Uganda in the Ruwenzori region to critique projects that were implemented using donor funds, in terms of economic and social contribution indicated that despite the increase in funding towards poverty reduction programs, poverty was still high.

A study by Kiprop, Nzulwa and Kwena (2017) on challenges facing sustainability of donor funded projects in Kenya found out that although most of the project practices had been implemented for a long period, there were however, particular features of implementation that were difficult to be achieved by the donor thus challenging the sustainability of these projects. Ouma (2012) on effective implementation of donor funded projects argued that to achieve sustainability, various interventions are required which could counter the high rate of project failure. Kuria and Wanyoike (2016) found out that reconciling the perspectives of different stakeholders (including intended beneficiaries) through the use of different sources and methods greatly enhances the sustainability of donor funded projects. With the divergent views from different scholars about what contributes to the high rate of project failure, this shows that there is limited information available about the factors that contribute to sustainability of donor-funded projects. This study will therefore fill in the existing knowledge gap.

1.3 Objectives of the Study

1.3.1 General Objective

The chief agenda of the study was to assess the factors impacting the sustainability of donor funded water projects in Machakos County.

1.3.2 The Specific Objectives

The study was guided by the following specific objectives;

i. To examine impact of monitoring and evaluation practices on sustainability of donor funded water projects.
ii. To find out influence of management expertise on the sustainability of donor funded water projects.

iii. To examine the impact stakeholder involvement on sustainability of water projects funded by donors.

iv. To find out the influence of capacity building on stakeholders on the sustainability of donor funded water projects.

v. To find out the influence of political environment on the sustainability of donor funded water projects.

1.4 Research Questions

The study was to seek to answer the following research questions;

I. What is the effect of monitoring and evaluation practices on sustainability of donor funded water projects?

II. What is the influence of management expertise on the sustainability of donor funded water projects?

III. What is the effect of stakeholder involvement on sustainability of water projects funded by donors?

IV. What is the influence of capacity building on stakeholders on the sustainability of donor funded water projects?

V. What is the influence of political environment on the sustainability of donor funded water projects?

1.5 Significance of the Study

Donors play a very essential role; they act as an avenue that the government and other agencies can use to deliver resources give assistance communities especially the poor. With increased donor funding in areas of food security, education and health, it is important to study and determine the

factors that affect the sustainability of these projects. This project report was therefore useful to the following groups:

International and local donors are beneficiaries this study by understanding on how well they can monitor development projects to ensure their sustainability. The NGO Council will have an opportunity to understand how to support the NGO sector in an effort to fulfill its mission of providing efficient services, coordination and facilitation to the sector in order to enhance the contribution to the socio-economic development and improvement of the welfare of the project.

The study was important for future researchers and academicians as it has provided areas for further future research and contributed more materials to the existing literature.

1.6 Scope of the Study

The study focuses on donor funded water projects in Machakos County. The county enjoys water funded projects like Community Based Organization (CBO), Faith Based Organization (FBO),Non-Governmental Organizations such as International Fund for Agricultural Development (IFAD), World Food Program, Food for Hungry (FHI), United Nations Science and Cultural Organization(UNESCO) among others that aim to alleviate

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the level of funding, M&E, how target groups involvement and project staff participation influences the implementation of donor funded projects. This chapter reviews theoretical framework, empirical review and the conceptual framework.

2.2 Theoretical Review

2.2.1 Agency Theory

Jensen and Meckling (1976) urged that agency stems from where the principle donates rights to the third party to manage a project on his behalf. Milner (2008) applies the principal-agent model to demonstrate domestic politics in donor countries. He argued that when the taxpayers (principals) feel that the aid agency (agent) is not attending to their interests in developments a broad through the funds contributed for the purposes of development projects in developing countries, the agency tries to ease the situation by channeling aid through multilateral organizations. Wood(2008)further argued that voters in donor countries, who are the principals, have biased or in accurate information about the actual benefits of their government's aid channeled to the agencies who are considered to having incentives to misrepresent their impact to the donor countries whereas multilateral agencies have fewer incentives to appeal to a particular country's constituency

Jensen and Meckling (1976) defines agencytheory as a contract that defines the relationship between two parties the principal and the agent. The agent performs some service on behalf of the principal .The principal on the other hand delegates some decision making authority to the agent. Agency theory is concerned with resolving problems that can exist in agency relationships; that is,

between principals such as shareholders and agents of the principals for example, company executives. Many are the times when there exists disagreements or conflicts between the principal and the Agent. The interests of the principal may not be met and the agent while believing that he has fulfilled his mandates may feel being taken advantage. Agency theory therefore will act as an intermediary to resolve the conflicts between the agent and the principle. There are also instances where the principal may be unable to verify that the agent has failed to fulfill his part of the obligations. This is an example where there are varying attitudes on risk between the principal and the agent. These different views on risk therefore results in the agent and the principal taking different actions.

(Odedukun, 2003) explains the agency relationship between the donor and the recipient of the donor funds as that of Principal and Agent respectively. The donor provides funds believed to be adequate to the borrower who depends on the aid regulations laid down and sets the consumption patterns. The results can then be seen through economic growth, development of infrastructures, and ability to access education to the poor as well as affordable health. Through a systematic follow up and a system of evaluation, the donor directs the choice taken as well as project outcomes.(Jensen &Meckling, 1976).Agency theory confirms that the expectations of different individuals while undertaking a similar project will vary depending on the motivation of the individuals. The expectations will conflict and efficiency will not be separated from effectiveness while there will always have information asymmetry between the agent and the principal,(Nikkinen&Sahlström, 2004).

According to Jensen and Meckling (1976), the motivations for various parties may vary from the motivation of a single Agent. Information in possession of a single party such as the National Government or the county government may not be available to the donors. The government may

not provide all the critical information needed by donors for decision-making. It is important therefore, to merge the methods must be evaluated to avoid both parties being disenfranchised.

One of the ways to combat this problem is through use of a loan procedure document that highlights procedures for disbursements that must be adhered to by all parties. The challenge with some of the procedures is that they have a tendency to favor the donors in the country of origin in such a way that it becomes extremely difficult to know the timing of the funds and the processes are mostly filled with errors, (Keng'ara ,2013)

The Agency theory manifests in the relationship between the donors and the County Government of Machakos since the County Government of Machakos has a set of preferences for use of the donor money while on the other hand the donor has more focus on the poor than the County Government. The donor therefore has an upper hand in setting the procedural conditions based on the actions by the recipient. The donor hence can initiate proper actions by the county government by issuing unchangeable rules regarding funds disbursement. The donor hence becomes the lead and better positioned given the fact that the donor is more mindful of the poor peoples' welfare. Walker (2003) points out that agency theory arises from information asymmetry coupled with self-interests of the principals with their agents. There is lack of trust for principals to their agents and hence the principals devise methods of minimizing the agency risks through reduction of information asymmetry and opportunistic tendencies, (Keng'ara, 2013)

Jensen and Meckling (1976) argued that in their relationship of urgency conflicts of interest will always arise hence it is called upon the parties to structure policy and laws that mitigates them. Green (2006) views poverty eradication as policy oriented war and calls upon project managers to be employed from pool of qualified personnel on contractual basis to avoid conflict of interest.

2.2.2 The Stakeholder Theory

Business operates in an environment and must always take concern of its actions and decisions since they affect all the stakeholders in the environment. The stakeholders could be based on contractual relationship like managers, employees, government and shareholders on non-contractual basis on society. Freeman (1984) givesthe traditional definition of a stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives". The general idea of the Stakeholder concept is a redefinition of the organization. Friedman (2006)considers an organization as a group of different stakeholders who come together with different goals and visions and therefore the organization is obligated to meet their expectations. According to Freeman (2004), stakeholders relate to key groups that highly determine the continued existence and growth of the organization. In a recent publication, Freeman gives a new perspective of the stakeholders and points out that it is important for the concept of the stakeholders to be taken in the management of the organization. He points out to the concept of stakeholder recourse which is where stakeholders may institute a legal proceeding against the directors of an organization when they fail to carry their obligations as they fall due and as required.(Freeman 2004).This is referred to as normative stakeholder theory in literature

Normative Stakeholder theory contains theories of how persons in management in an organization should carry out their obligations and implement the organization goals with an ethical principle in mind. (Friedman 2006). The main group of stakeholders include Company clients, the community within the environment in which the organization operates, both temporal workers and those who are employed on permanent basis, the suppliers and distributors of commodities, the different people in media including social media, strategic partners of the company, future expected customers, clients who existed in the past and are potential customers, company shareholders, competitors of the company ,other Non-GovernmentalOrganizations and activists

considered individually, representatives to the various stakeholders like trade unions and associations who look into the affairs of the members, partners who support the company by providing finances such as banks and other financial institutions, stockholderse.g. bond holders and creditors, regulators of the industry in which the company operates, the government,

Includes customers, local communities, employees, policy makers and shareholders (Friedman 2006).

Freeman (1984) argued that "Gone are the good old days of worrying only about taking products and services to market, and gone is the usefulness of management theories which concentrate on efficiency and effectiveness within this product-market framework". He found out that strategy theories were no longer the solid reliance tools for managers in developing of new strategies and directions and neither do they offer room for opportunity creation. Freeman considered the word stakeholder suitable owing to the original meaning of stakeholder, which in the traditional sense considers more of the economic viewpoint as opposed to any other view. In this regard, stakeholders have been taken to mean anything that hinders or has the potential to prevent the achievement of an organization's objectives as required by the owners. (Freeman 1984).

The idea of stakeholder has led to various similar theoretical developments, which were consolidated in Donaldson and Preston Article. "The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications" (1995). They suggested that the stockholder theory literature can be seen as three branches: Descriptive: The aim is to understand how managers deal with Stakeholders and how they represent their interests. The corporation is viewed as a constellation of interests, sometime competitive and sometime cooperative; the analytic theory can accommodate with the different views of the stakeholders and Instrumental Approach: this comprises the study of organizational behavior of managerial stakeholders and checking the connections between the practices of managing stakeholders and achieving corporate governance

goals. Normative: It is the ability to find out the guidelines connected to management activities or corporate management. Donald and Preston argued that when the three approaches are used together without being acknowledged then this would lead to confusion.

2.2.3 Sustainability Theory

Sustainability is the ability to change the state and creating accessibility of desirable needs in the long term. The definition points out the basic values of sustainability and sustainable development as required for the long-term goal. It also alludes to the particular conditions needed for maintaining the values. This definition may serve different interests as well as goal-orientedinterests. Kates et al. (2001) considers sustainability simply as a way of providing basic human needs while at the same time ensuring that the support systems are kept in place and the extent to which they reach the global scale. The need for sustainability means that the pursuers have the goal of maintaining or make improvements to beneficial matters in terms of capacity and give desirable outcomes in the long run.

Sustainability therefore calls for maintenance of desirable features of a natural or social condition and where necessary improve on the status of the natural resources. Sustainability therefore super cedes sustainable development as it concentrates on the well being of the humans.(WCED 1987).Sustainability focuses on the status of an ecosystem or biodiversity without expressly focusing on human wellbeing or at times may focus on a specific area of a human system such as ensuring equal access to education and financial wellness of a specific farm(Palmer, Cooper, and van der Vorst 1997; Was et al. 2011).In totality, sustainability is concerned in long-term solutions for natural resources ,social systems and people while putting into consideration human wellbeing and dynamic system stability.

Bettencourt and Kaur (2011) have looked at sustainability in depth touching on its structure and its evolution over time. However, their concepts regarding sustainability do not provide a good

compilation or origin of the basic principles needed for both applied efforts related to sustainability to allow sustained development.

The rural sustainability has particularly drawn increased attention among different authors and researchers. Marsden 2003; Essex et al. 2005; Robinson 2008; Wilson 2010; McManus et al. 2012)...This is due to the challenges associated to rural sustainability. Among the challenges include use of the resources sustainably, community resilience to existing risks and the economic development resulting from use of and management of environment resources (Woods 2012).The rural world gives the materials and energy for the urban consumption and bears most of the waste released from activities carried out in the urban areas.Most inhabited places in the world are rural and the dynamics of the rural areas control most of the functions and at the same provide services that are important to the ecosystem as well as natural resources.This includes ensuring continued supply of food. An example is the supply of food in Rome cities for the different quantities of food, building materials and wood. These kind of supplies were environmental goods supplied to urban cities while the resulting waste materials are taken to the countryside .Kennedy, Cuddihy, and Engel-Yan 2007; Villarroel Walker and Beck 2012; Moore, Kissinger, and Rees 2013; Zhang 2013).

Zucaro et al. (2014) for example point out cities as open systems which depend on other systems for provision of basic needs including food, water, and information at different times. They noted other scholars who were of the same view that cities were parasitic in nature. They therefore advocate on the importance of recognizing the crucial roles played by the rural areas as they focus on their own sustainability.

Availability of fresh water and its quality have both drawn global attention due to the increased demands for agricultural and other uses resulting from increased populations. (Simonovic 2002; Hoekstra et al. 2012; UN WWAP 2015).Additional concerns related to rural areas include

pollution of soil,infertility,deforestation and decreased natural habitats ,biodiversity as well as pollination.(MA 2005; Foley et al. 2005, 2011).

Foley et al (2005) assert that there has been a considerable reduction in arable land estimated to be equal to $11 Billion of lost production. Other causes of lost arable land has been associated with activities such as soil erosion, reduction in soil fertility and overgrazing. They also noted, “Modern agricultural land use practices may be trading short-term increases in food production for long-term losses in ecosystem services, including many that are important to agriculture. Sustainability is linked to choice while choices are dependent on the desired outcomes .Sustainability is therefore is a claim that has no clear basis. (NRC 1999, Kates *et al.* 2001, Parris and Kates 2003)

Both sustainability and sustainable development have been embraced as something that has brought positivity to people and increased environmental health. According to medical ethics of not doing any harm, the goal of sustainability and sustainable development is achieved. In environmental risk management, the principle is used as a precautionary measure to ensure the results of an action are known before the implementation of the action. Sometimes the varied applications of sustainability and sustainable development may bring about lack of trust and even confusion. (Palmer, Cooper, and van der Vorst 1997; see also Devlin and Sophocleous 2005, Aras and Crowther 2009).This happens more often when used without giving clear motive of the subject matter under discussion. In rural environments, sustainability is used in various ways while putting emphasis on one aspect over another aspect. (Cawley, de S.M. Bicalho, and Laurens 2013).While variations in the definition of sustainability do not make the term unusable, it is important to have very straight forward understanding the reasons and understanding of sustainability in particular situations. Any unclear use of the word poses a challenge and leads to the purpose for sustainability not being achieved in formulating policies as well as management.

To maintain good environment for water projected funded by donors Machakos county must seek through its own intuitive to channel funds, human resource and financial.

2.3 Empirical Review

2.3.1 Monitoring and evaluation and sustainability of donor funded water projects

According to Tilbury (2007) urgues that monitoring and evaluation for sustainability of donor funded projects is a continuous process that seeks to strike balance between accountable management of resources and cost benefit analysis to the community.

Sustainability is the continuation of benefit flows to the local community without the help of the initiators who stimulated those benefits in the first place. Several projects stall after the withdrawal of the donor. Donors play a significant role in the social development process in all regions of the world. They are particularly critical in circumstances where State funds are limited, political situations are fluid, natural disasters resulting from both predictable and unpredictable environmental circumstances occur, ethical strife is rampant and the level of per capital income severely restricts the ability to purchase needed goods and services- social, education and economic. In Central America donor funded projects were more sustained because of the strength of the institution implementing the projects. The other factors that contributed to sustainability of the projects were; their activities were fully integrated into established administrative; gained significant funding from the national sources and also there was a strong capacity building component. In India NERCORMP s' findings revealed that there is a great extent of success in social mobilization and institutional capacity building at the basic level of communities. (Tango International, 2009).Much of this success was associated with increased emphasis on formation of groups to take active participation as well as participation in project designing as a priority. These projects achieve their goal due to active participation through offering of labor, provision of necessary materials and to some extent provision of finances in form of cash. (Tango International,

2009). In South Africa, Sustainability has undergone major research by natural scientists and environmentalists in order to propound the issue of wise use of resources, both renewable and 1non-renewable, so that they are made available in right quantities to future generations Lyson et al. (2001); Treurnicht (2000). Much of this has been in the field of sustainable development. Joaquine (1994) did a study on development sustainability through community participation in which he associated project failure with weak institutional linkages, scarcity of resources and low workforce motivation. In Malawi Detailed, analysis of sustainability issues reveals inconsistent formation, training, support and development of water point committees. Many committees were found to be ill equipped for the tasks they were assigned: that is operation and maintenance of water points and collection and deployment of maintenance funds. Slymaker & Newborne, (2004). In Uganda, Busiinge (2008) notes that donors need to carefully plan involvement of project beneficiaries' in design and implementation of community development projects. He adds that this will go a long way to achieve project ownership by the beneficiaries and the local government. He further suggests that in the event that NGO and Government co-financing is achieved, the continuity of project might be achieved. In Kenya, Okun (2009) studied arid and semi-arid areas and the factors that affected sustainability of donor-funded projects and asserted that in order to ensure sustainability of projects, it is important to offer education to the community. This will enable the communities to proceed with the projects even after the donors have withdrawn. Further it is important for the beneficiaries to be involved during all the three stages of the project i.e.initiation, preparation and final stage.Adhiambo (2002) also argued that it is important to motivate more participation of the community during planning and implementation because it gives high chances of sustainability of the projects. A study by Kitonga (2011) concluded that community awareness and preparation to take part in the projects is key in ensuring sustainability is achieved.

Mureithi (2012) in his work on Influence of Community Capacity Building on Performance of Water Resources Users Association in Water Catchment Management in Tharaka – Nithi observes that there is need for WRUAs to be capacity build not only in training but also on skills of networking, information and knowledge management.

The quality of life in a society highly determines sustainability. This could be economically, socially or in terms of environment, which enables the community to provide wealthy, productive and meaningful lives to the residents of a specific area in both the present and even the future. (Hak et al., 2007).

According to FAO (2000a), the term sustainability with regard to development projects is the ability of the local community to meet the cost of the project. It means that benefits flowing from the development project to continue and it will be able to be maintained after external intervention of donor funding has been withdrawn. Developmentprogrammer is sustainable when it is able to deliver an appropriate level of benefits for an extended period after major financial, managerial and technical assistance from an external donor is terminated (ILO, 1990)

Mvella (2000) notes that an indicator is a means by which the outcome of the project can be understood and in one form or another, measured or explained. Some of the indicators of sustainability include economic soundness of the beneficiaries and active involvement of local authorities or organizational members and gender sensitive project cycle management and compatibility of the interventions with social-cultural environment of the primary stakeholders (ILO, 1990). Sustainability of rural development projects has several aspects. This includes organizational capacity, environmental soundness, institutional development and economic viability. Factors affecting sustainability include(FAO, 2000b): a conducive policy environment; clear and realistic goal; project design corresponding to management and technical capacity of recipients; economic soundness and sustainability; affordable in terms of original costs and

operations and maintenance; active involvement of local authorities and target groups including women; choice of technologies appropriate to the economic and social conditions of the recipient; realistic timeframes; adequate maintenance and support system; compatibility with domestic socio-cultural environment and environmental sustainability. FAO (1986) also noted

That majority of the times, projects fail to achieve the intended goals resulting from diverse reasons including; economic instability, poor political environment in which the project operates, social limitations that act as external factors. For example existence of bureaucracy and confusion, less commitment from the project leaders, political instability, diverse policies that keep changing over time, consistent shortage of funds and poor infrastructure. Within the project framework, the technical, organizational, operational and institutional factors have been affecting sustainability of development projects.

2.3.2 Management factors and sustainability of donor funded water projects

According to Eyong (2009), good governance is a means to protect exploitation of community in donor funding. The resources must always be managed in a prudent and accountable manner that adheres to the principles of governance for sustainability of the benefits. Maximum benefits to the society must be the main objective in long run. Equally, county is advised to collaborate with the donor and provide good friendly environment for operationalization of such projects. County government with collaboration with donors must come up with documented policy, procedures and structures of governance to ensure accountable management of resources.

Becausea single individual cannot achieve improvements needed in the society, management factors and water projects funded by donors are put in place. (WHO, 1996)

Doe and Kahn (2004), asserts further that the common interest of the society is achieved through community management. According to (WHO 1996) capacity building as a way of community

management to address the existing needs enables the government to refocus on more fundamental matters affecting the society.

It is believed that community management concept originated from the west where the idea was to incorporate low income communities (Harvey & Reed, 2007).It is believed that the community management concepts' acceptance was as a result of their individual agendas and interests.(IRC, 2003; Lockwood, 2004).Even though different reasons exists among practioners regarding the acceptance of community management, one factor is clear that donors have a duty to enlighten the community members on important skills to allow for continued sustainability of water projects in both entry and exists of the donor.

The basic rules of community management include participation by the community, control, ownership and sharing of costs (Lockwood, 2004).Regarding water projects, effective community management and sustainability can only be achieved by factoring in both internal and external factors, which highly determine the success or failure of a water project. Factors such as disunity in community, inadequate skills in management, inactive committees, poor cultures, and poor priorities must be given consideration when carrying out community management. (Schouten & Moriarty, 2003)

One of the best ways to achieve Community management is through formation of a water committee which is a body formulated voluntarily by members of the community. The committee makes decisions on behalf of the community on matters related to water projects locally. Such a committee once formulated must ensure a smooth operation and the same time ensures it meets the needs of the community it represents. That is the poor and the wealthy, all genders and categories of its members as well as the members living in different areas. (Bolt and Fonseca, 2001)

It is necessary for such a committee to seek a legal framework to back its operations especially in signing contractual agreements with various stakeholders such as banks. This gives the various stakeholders some comfort in knowing that the donor-funded projects are not at stake. Further, the members of the committee are not held personally liable for any debts, contracts and obligations. This has a tendency for community members to volunteer becoming committee members. (Bolt & Fonseca, 2001).The sustainability of the project is also highly dependent on the project manager to lead the project. Such a person must exhibit relevant skills related to project management, in addition to technical skills.(Kirsch, 2000).According to (Thite, 2001) over the years, community participation in project implementation and development has become prominence and its variants have taken on particular prominence in the policies of bilateral and multilateral development agencies.

For instance, the Development Assistance Committee (DAC) of the Organization for Economic Co-operation and Development (OECD notes that for sustainable development, projects must be locally owned and that development co-operation have to be shifted to a partnership model, where donor programs and activities operate within locally-owned development strategies (as quoted by Saxby 2003).In the policy document, donors were urged to respect and encourage strong local commitment, participation, capacity development and ownership of the project activities. Like the OECD/DAC, Wolfensohn (1999) emphasized that donors should provide supportive role, while working closely with governments, business and civil society. Canadian International Development Agency (CIDA) echoed similar sentiments in 2002by reiterating the importance of local ownership as core principles of effective developmental initiative at community level (CIDA, 2002). Locals must have intrinsic value in project management if they are to be on constant look out to maintain efficiency, effectiveness and accountable management of resources.

In the Arnstein's ladder, community involvement was pointed out as an important ingredient likely to provide better results of any donor funded project in terms of sustainability (Bell, 2010). He identified three key ingredients necessary for community involvement in donor-funded projects. These include empowerment of local communities to take command of the projects, the practice of co-opting community members to take part in existing programs, and finally as a masquerading public relations exercise, justifying a predetermined donor project. This is a pointer that community mobilization and empowerment are important in donor-funded projects. According to the Society of Public Health Education (2010), community mobilization is a process through which the communities, individuals or groups implement and evaluate donor funded projects influences ownership in that actions regarding the project are organized around specific community issues of concern. Community empowerment on the other hand involves a goal in itself since the community takes responsibility of the actions related to any project and that empowerment gives the community opportunity to demand transparency and accountability of all the parties involved in the donor-funded project (Henderson &Vercseg, 2010)

To obtain a reasonable result, past research has recommended that communities must give a participative role and this necessitates adoption of an attitude of forming a team with the people. (Anderson & McFarlane, 2010).Further when activities are carried out on behalf of people, there exists a tendency for the emotional connection being lost and consequently the importance of participation is lost.

Various determinants encourage participation of communities in a project. These determinants are motivation oriented and may include availability of resources, the economic status of the society, personal interests in the donor-fundedprojects.etc (Boyes & Melvin, 2010).

Other factors such as Geographical locations i.e. whether rural or urban may also determine the level of participation. Urban communities tend to participate more in projects owing to their exposure in terms of education and availability of information .Their rural counterparts however may respond slowly to a call to participate in projects due to less awareness, less education and poor attitude towards projects. They tend to look at development projects with a lot of suspicion leading to minimal participation (World Bank, 2010).

There is a doubt whether there is effective leadership a far as political and social cultural areas are concerned. Furthermore, concern goes to whether the existing cultures are able to accommodate development ideas. It is concluded that good leadership is manifested through transparence and honesty, which brings about a sense of ownership. (Syokau et al, 2010)

The Kenyan Government has been in the forefront in embracing Participatory development in order to encourage communities to take ownership. The government has done this through creation of partnerships between communities and donors. Vorhölter (2009) observes that the participatory theory is focused on people, expects full commitment to projects, calls for self-reliance and calls for community driven developments. Participatory development is key in two great ways; first, it empowers communities by giving them the ability to negotiate with organizations and consequently participating in public policies. Public policies provide checks to the power of the government .Participatory development also provides a check on efficiency, effectiveness and continued sustainable programs. (Narayanasamy, 2009).

Stakeholder capacity building and Sustainability of donor funded water projects. By creating a sense of community ownership, participation leads to effectiveness and better decisions in projects (Kelly and Van Vlaenderen 1995). Price and Mylius (1991) pointed out that; to guarantee continued sustainability in projects, it was critical to cultivate the attitude of ownership, which can

only be achieved through encouraging active participation of all parties to a project. Kelly (2001) asserts that active participation has the benefit of enabling learning, which is a critical requirement for changes of behavior and practices. When all parties take an active role in a project there are various advantages that accrue. One advantage is capacity building which will lead to own future identification of projects by the individuals. Consequently, there will be efficiency and sustainability.

Kumar (2002) noted various advantages associated with active participation in projects. One of the benefits is that it ensures there is efficiency since people provide resources that help achieve the common goals. Additionally participation ensures that goals are achieved within the set timelines and therefore they encourage involvement in M &E, which enables monitoring of the projects. Consequently, there is increased effectiveness. Through participation of stakeholders in planning and designing, effectiveness is also achieved. Through participation, participants of a project achieve learning and this means they stop relying on external assistance to meet their needs. Individual efforts are put in place to ensure problems are addressed thereby reducing the dependency syndrome. Resources will be mobilized in order to address any shortages. Therefore, participation of stakeholders is of great importance as it guarantees continued sustainability for development projects. Consequently, capacity and empowerment is achieved within the communities. (Korten, 1984; Botchway, 2001).Taking part in the projects by direct beneficiaries also guarantees enhanced capacity and therefore the parties to the project are able to identify, implement, monitor and evaluate projects in place. (Duggal, 2011)

Stakeholder participation is a major concern regarding the sustainability of community development projects, and that the international community continuously pushes the less developed world to engage community members in discussing issues that affect their wellbeing. The World Bank and the United Nations emphatically state that the development agencies have a

crucial role in promoting community involvement approaches, specifically the bottom-up approach is crucial for project performance and sustainability (Bal, Bryde, Fearon, & Ochieng, 2013). The approach is preferred to the top-bottom approach because it facilitates implementation and makes the community members feel that they are part of the project and own the process. Stakeholder participation is a prerequisite to a perfect delivery of project outcomes since well-management community engagement process assists the participants to work towards increasing the wellbeing of humans, while reducing negative environmental influences, and scaling up economic sustainability of projects (Maina, 2013). Stakeholder participation should, therefore, be adopted a core ingredient in any sustainable development project (Golicha, 2010). It is crucial for governments and international agencies that implement community projects, and can adopt different participation approaches to make sure that they succeed in their project goals. Passive participation allows the community members to assume a full role of looking for solutions to their problems. External agents' implements projects without necessarily having any control over decision-making and resources. Their tasks are reduced to teaching the community members appropriate ways to look for solutions to their own problems (Boon, Bawole, &Ahenkan, 2012). The intention of the external players is to legitimize their participation in the project while the community members charge of receiving and paying attention to suggestions the external agencies propose. Interactive participation allows people to take part in joint analysis, designing action plans, and strengthening local institutions (Chifamba, 2013). The process makes participation viewed as a right and not a mere means to attain project goals. It involves interdisciplinary methodologies that adopt multiple perspectives, systematic, and structured learning approaches to produce positive and empowering influences, which improve performance and sustainability of community development projects. Functional participation is more action-oriented towards achieving project goals. For example, participants can form groups to discuss ways of cutting down

costs involved in project implementation (King'ori, 2014). High costs are likely to compromise the sustainability of development projects, and that they should be minimized. Considered necessary for the decision-making process (Oino, Towett, Kirui, &Luvega, 2015). Optimum participation enables allows community members to participate in the development projects by taking initiatives independently of the external agencies to change systems (Ofuoku, 2011). Although the community stakeholders maintain contacts with the external actors for resource-help and technical expertise, they retain the control over the manner in which resources are used (Ayuso, Rodríguez, Castro, & Ariño, 2011). However, a lack of optimum engagement of community member is cited as a major cause of poorly performing and unsustainable projects often witnessed in the less developed countries (Masanyiwa & Kinyashi, 2008). In 2014, Plan International conducted an evaluation of its community development projects and realized that the projects barely go beyond six months when funding stops (Plan International, Homa Bay PU, 2014). The situation is wanting since Plan International activities in Nyanza region are concentrated in three poverty-stricken units of Homa-Bay, Kisumu, and Bondo (Plan International, Homa Bay PU, 2015). Better performance and sustainability of community projects in these areas are key to the wellbeing of the households who live below the poverty line, and this can only be achieved through the effective participation.

Good management involves cooperation of professionals and corporate governance procedures and policies to achieve the objective of project UN 2011.

2.3.3 Community involvement and Sustainability of donor funded projects

The current environmental literature emphasizes the necessity for community participation to pinpoint pointers to monitor growth towards maintainable advancement and environmental management objectives (Fraser et all, 2005). The scholars concluded that the identification and collection of sustainability indicators not only provide valuable databases for making management

decisions, but the process of engaging people to select indicators also provides an opportunity for community empowerment that conventional development have failed to provide;

Multi-stakeholder processes must formally feed into decision-making forums or they risk being viewed as irrelevant by policy-makers and stakeholders and since ecological boundaries rarely meet up with the political jurisdictions ,it is necessary to be flexible when choosing the scale at which monitoring and decision making occurs.

According to the World Bank (2014), community participation and involvement is appropriate when firstly, the objective of the project is empowerment of the people and capacity building, secondly, the design of the project activities calls for interaction among beneficiaries as a basis for identifying their needs and preferences ,thirdly, that the implementation of the project demands frequent dialogue and negotiation among beneficiaries and fourthly ,when beneficiaries (with initial external support) rather than an already overloaded or weak bureaucracy are better able to manage part of the project operations. They further observe that, in projects which deal with vast masses of beneficiaries for service delivery (people-oriented), there is considerable potential for the use of community participation. The main objective of community involvement in development work is to bring about social change and justice by working with all participants in communities to identify needs, opportunities, rights and responsibilities and also take action in order to eliminate oppressions and handle inequalities (Paulo, 2003).

Community benefits are best developed and monitored in collaboration with the NGO partner (Hansen and Spitzeck, 2011). Bajracharya, Furley and Newton (2005) discovered that community –based management has been successful in delivering benefits due to changing patterns of resource use and behavior among local communities, increased control by local communities over their local resources as well as increased conservation awareness among local people resulting from

environmental education. Community involvement and the related activities and events should be free from vested interest groups whose aim is egocentric and all participants should contribute to the goal setting, realizing that the end results benefit the community in entirety.

Morgan (2001) discovered that ideological and political disagreements continue to divide pragmatists, who favor utilitarian models of participation, from activists, who prefer empowerment models. The level of host involvement in management of projects help explain the varying degrees of economic leakage, local control and socio-economic inequity (Nyaupane, Morais and Dowler, 2005). Involvement of all beneficiaries in the project design and implementation through consensus at national and donor levels for project sustainability is key to achieve targeted development programs (Howlett and Nagu, 2001). Giving an opportunity to the community to participate in donor funded projects could bring about enhancement of creativity, innovation and general satisfaction that may influence the economic, political and social operations of the society which is human development base (AUSAID, 2000).

2.3.4 Stakeholder capacity building and Sustainability of donor funded water projects

The notion of stakeholder capacity building is both explicit and pervasive in the rhetoric, missions and activities of a broad range of contemporary community development efforts. Capacity development is the engine of human development. Capacity is the abilities, skills, understanding, attitudes, values, relationships, behaviors, motivations, resources and conditions that enable individuals, organizations, networks/sectors and broader social systems to carry out functions and achieve their development objectives over time (CIDA, 2000). Capacity building is an evidence-driven process of strengthening the abilities of individuals, organizations, and systems to perform the core functions sustainably, and to continue to improve and develop over time (PEPFAR, 2000). According to UNDP (2014), capacity building is a transformation that is generated and sustained

over time from within. The transformation goes beyond performing tasks; instead, it is more a matter of changing mindsets and attitudes for all the stakeholders. Capacity development involves three levels, individual; which involves peoples' ability to acquire skills and knowledge that will empower them to make progress, societal; which includes the environment that in one way or another the ability of individuals and organizations to change and organizational level that is created to when people have knowledge and skills and work together and which results to organizational capacity over time (DAC, 2006).

Donors should empower beneficiary communities to be able to lead in development projects and they themselves should take a supportive role (Neil, 2003). Eade (2010) argue that sharing responsibilities and risks, mutual accountability, and committing to the long term rather than to short-term projects are more likely to create partnerships that can withstand vicissitudes and contribute to lasting change. However, Low and Davenport (2003) point out that despite considerable rhetoric about the need for donors to adopt more coordinated approaches to capacity building, there is limited evidence to suggest that donors are prepared to act together to set up, for example, joint capacity building funds. Further, the challenge for governments is how to enable processes of capacity building, consultation and community ownership without creating unreasonable pressures on residents of rural communities (Simpson, Wood & Daws, 2003).

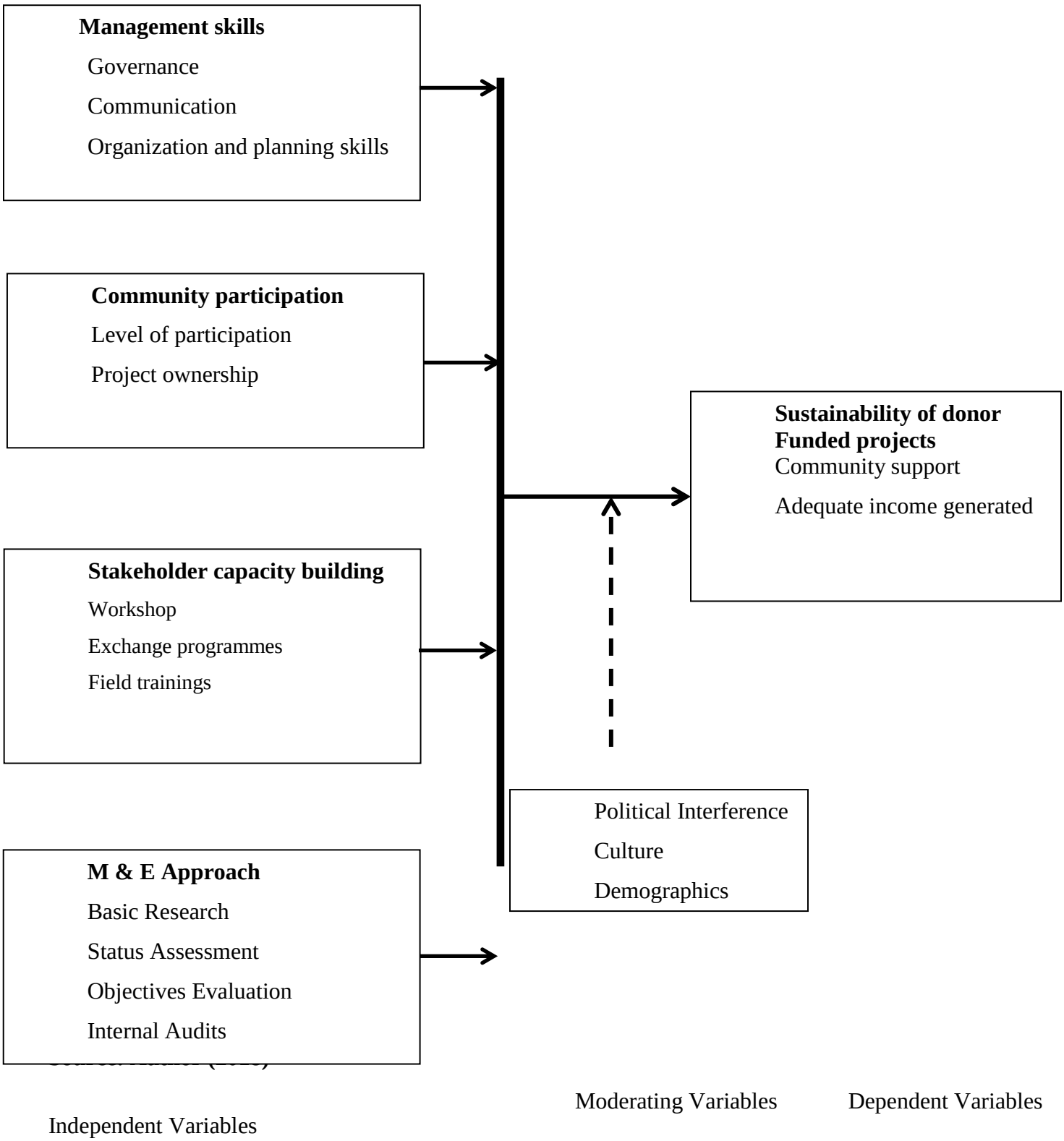
Systematic approach to capacity development can greatly enhance the scope for learning about what happens in different contexts by improving comparability across programs and easing the administrative burden on developing-country partners by harmonizing donors' projects specifications and the way they measure results (World Bank, 2009). According to Grindle and Hilderbrand (1995), organizations or training activities are the logical site for capacity building interventions and that designing interventions that most constructively address sources of poor

performance must follow from an assessment of a relatively broad set of variables, including the action environment in which all such activities take place.

2.4 Conceptual Framework

A conceptual framework is a theorized pattern of establishing the ideas in a study and the way they relate (Mugenda & Mugenda, 2003).The following is a diagrammatic illustration of donor funding influences on a project's sustainability.

Figure 2 .1: Conceptual Framework



2.4.2 Operationalization of variables

The variables of this study are operationalized as per table 2.1 below:

Table 2.1 Operationalization of variables

Variable	Variable Type	Indicators	Scale
Monitoring and Evaluation	Independent	Importance ascribed to Monitoring and Evaluation E in the success of projects. Whether projects with a well- structured M&E system boost sustainability of donor funded projects	Interval/Ordinal
Management Factors	Independent	Good governance Adequacy of planning and organization skills and their effect in the success and sustainability of the project	Interval/Ordinal
Community Involvement	Independent	Perceived effect of community involvement on the ownership of the project. Willingness to encourage others to develop interest on the project success	Interval/Ordinal

Stakeholder Capacity building	Independent	Benefit enshrined in capacity building in ensuring the sustainability of projects. Perception that projects with consistent capacity building programs are seen as more successful.	Interval/Ordinal
Sustainability of donor funded projects	Dependent	Perceived link between monitoring and evaluation, management skills, community involvement and stakeholder participation and the current level of success	Interval/Ordinal
Environmental factors	Intervening	Demographic location of the project impact on sustainability of the project	Interval/Ordinal
Political interference	Moderating	Perceived government structures and legislation with sustainability of donor funded projects	Interval/Ordinal

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter entails conceptual methods of conducting the research. It entails research design, target population method of sampling, sampling procedure data collection and empirical analysis methods

3.2 Research Design

The study adopted descriptive methods since it involves quantitative data. The data was collected through questionnaires about their opinions, ideas and perceptions on what, how, where, when the phenomenon under study affected them. The main advantage of descriptive survey research design is that it gives definite characteristics of elements (Kothari 2003). The information obtained from the sample elements is used in generalization of the population after data analysis. The data was analyzed and tabulated in numbers to allow for the statistical computation of mean and standard deviation (Hittleman, 1997). Descriptive methods allow collection of large amounts of data from target population for sampling and to be analyzed using frequency distribution tables.

3.3 Target Population and Sample Frame

According to Mugenda & Mugenda (2003), a population is a complete set of elements that is persons or substances having some shared noticeable characteristics while population targeted are groups of individuals or objects in their entirety to which a researcher would want to generalize the findings of a study. The target population for this study will be 134 members of the 20 community development water projects implemented by in Machakos County.

Out of this 134 people, 60 will be officials while 74 will be normal members (Appendix 7).

3.4 Sample size and Sampling procedure

Mitchell and Jolley (2013) defines sampling as a process where units are chosen from a population of interest as a representation of the entire population in order that the end results would present a generalized but representative image of the population under study. An ideal sample should be large enough to ensure that the validity and reliability of the data is attained (Wiersma, 2005). There is no exact size of the sample but this depend on the purpose of the study and the nature of the population under review Cohen (2007). Generally, though, the larger the sample the more reliable it is. It would have been ideal and preferable to collect data from all the members of the 20 community donor funded water projects. However, due to constraints such as time and resources sampling had to be done.

This study adopted a formula by Yamane (1967) for estimating a sample size, N.

$$n=\frac{N}{1+N(e)2}$$

Where

n = required sample size

N = the target population

E = level of significance (5%)

Substituting these values in the formula yielded a sample size of 100 respondents as shown below.

$$100=\frac{134}{1+134(0.05)2}$$

The researcher used multiple stage sampling methodology due to information asymmetry across the elements of sampling frame. The primary stage involves differentiation of elements based on

level of knowledge on the subject matter. Secondary stage includes obtaining information from pre-determined number of elements in the sample. Primary stage takes information from two group'sgenerally knowledgeable group about the subject to those with specific knowledge on the aspects of the subject. Table 3.1 shows study sample and their relative percentage.

Table 3.1Target Population

Category	**Target Population**	**Sample Size**	**Percentage**
water supply projects	23	20	20
Bore hole projects	27	22	22
Earth dam projects	22	18	18
Rivers and dams	25	19	19
Water projects	37	21	21
Total	**134**	**100**	**100**

Source: Author (2019)

3.5 Research Instruments

The main research instrument/tool that was used to obtain information from 20 donor funded water projects was a written questionnaire. The questionnaire had two sections, Section a sought to obtain general information from the sample while section B sought to obtain detailed and definite on the underlying sustainability of donor funded water projects.

3.6 Reliability of Research

Reliability of research is the ability of the research to replicate in other areas. Validity depends primarily with utilization of research instruments Mugenda and Mugenda (2003). To ensure validity principle the data sought expert opinion of supervisor when designing the research instrument whilst reliability was tested by conducting a pilot study amongst 50 members of a Mani Borehole Water Project, which is in the neighboring Makueni County. According to Brotherton (2001), the size of the pilot study sample should be at least of the size of the actual study sample

3.7 Diagnostic tests

Diagnostic tests are procedures for regression analysis that seek to assess the validity of a model by exploration of the models' underlying assumptions, examination of the model structure by considering formulations that have fewer different independent variables or a study of subgroup observations and then looking for those that are poorly represented by the model or have a large effect on the regression model predictions.

T–test: This test was used to establish the significance of individual variables in the model and was applied at 5% confidence level. This level is appropriate for business research studies. The 2 tailed P-values will be used to test whether the coefficients are significantly different from zero at the individual levels.

F-Test: This was sued to test the overall significance of the regression model and was used to estimate that the individual coefficients are statistically different from zero at 5% significance level. Where hypothesis is tested, P-value can be used in testing of null hypothesis that all the model coefficients are equal to zero.

3.8 Data Processing and Analysis

Data from completed questionnaires was checked, coded and entered into a spreadsheet all set for analysis. The data was then be analyzed using SPSS 17. Multiple linear regressions were used to determine the relationship between donor funding and sustainability of donor funded community projects. In the empirical analysis, the following regression analysis was fitted.

$Y=\beta_0 + \beta_1 X_1 + \beta_2 X_2 \quad + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where,

Y=Sustainability of donor funded water projects

β_0= Constant

$\beta_1,\beta_2\beta_3\&\beta_4$ = Coefficients of$X_1,X_2 \quad X_3$ and X_4 respectively

X_1 = Monitoring and Evaluation

X_2 = Management factors

X_3 = Community involvement

X_4 = Stakeholder capacity building

ε = Error term

CHAPTER FOUR

DATA PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

The chapter focuses on data analysis, findings there in of study and interpretation of underlying forces of the sustainability of donor-funded projects in Machakos County. Regression model was applied in data analysis to determine relationship of dependent and independent valuables. The analysis will use the regression model to establish if a relationship exists between the Independent and dependent variables. The presentation adopted tables and bar graphs on selected study findings.

4.1.1 Response Rate

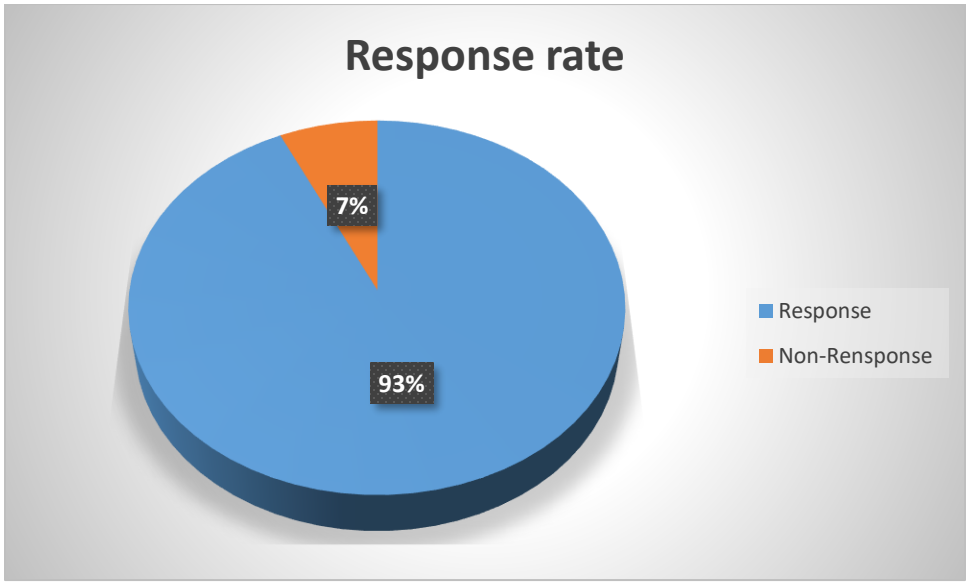
The study provided a presentation on the response rate as shown on the table.

Table 4. 1:Response Rate

Category	Frequency	Percentage
Response	93	93
Non Response	7	7
Total	**100**	**100**

Source: Author (2019)

Figure 4.1: Response rate



Source: Author (2019)

The response rate in this study was presented on the table 4.1 and figure 4.1. 93% of questionnaires were returned whereas only 7% of the total number of questionnaires was not returned.The response rate realized in this study is considered reliable for data analysis. , 93% Mugenda and Mugenda (2003).

4.1 .2; Demographic Information

This study looks into demographic information to determine the factors influence sustainability of donor funded water project in study area as shown below:

Table 4. 2 Demographic Information

Gender		**Frequency**	**Percent**
	Male	44	47.3
	Female	49	52.7
Age			
	20-29 years	1	1.1
	30-39 years	6	6.5
	40-49 years	24	25.8
	50-55 years	35	37.6
	Above 55 years	27	29.0
Highest Level of Education			
	O-level	15	16.1
	A-level	16	17.2
	Undergraduate degree	25	26.9
	Post graduate Diploma	20	21.5
	Master's Degree	17	18.3
How long have you been in the organization			
	Less than 5 years	31	33.3
	5-7 years	18	19.4
	8-10 years	16	17.2
	11-15 years	13	14.0
	Over 15 years	15	16.1
	Total	**93**	**100.0**

4.1.1 Gender: the study show the female gender were majority respondents at (52.7%) and male are at 47.3% this indicates that more female employee are more at the donor funded project.

4.1.2 Age the study indicated that 37.6 %, 25.8% and 6.5% were of age 50-55, 40-49 and 30-39 respectively while 29% has above 50 years. This shows the population of the study majority are in productive age bracket and the data is evenly distributed.

4.1.3 Education level: The study established that 27% were Degree holders, 21.5% were Post graduate diploma holders, 18% had Master degrees while 17.2% and 16.1% A-level and O-level respectively .This generally indicates that the respondents were evenly distributed in their education level.

4.1.4 Length of service: The research shows that 33%, 19.4% and 17.2% had a lifespan of working their organization ranging 1-5 years, 5-7 years and 8-10 years respectively. Above 11 years had a range rate of 14-16.1% which indicates that the managers had a strong knowledge and experience for the population studied.

4.2: Descriptive Statistics

Likert scale was used to analyze descriptive outcomes of the study. The analysis was based on mean and standard deviation whereby the scores of more than or equal to 4.0 were taken to represent positive response. While scores of 3.0 and below represented negative responses. A standard deviation of > 0.9 implies a significance difference on the impact of the variable among respondents.

4.2.1; Monitoring and Evaluation variable

To examine the influence of monitoring and evaluation practices have impact on sustainability of donor-funded water projects was the first objective.

The Table 4.3 below shows that most of the respondents agree that designing of monitoring and evaluation tools at average of 4.5484 the low standard deviation of 0.84076 indicates that the variation among the respondents was very low. It is also notable that the respondents were in agreement with the Analysis of data and preparation of reports at 4.584, Data collection during project implementation at 3.8387, Monitoring and evaluation feedback was utilized for improvement at 3.8172 and Participation in feedback and wrap up sessions at 3.7634 with high standard deviation of 1.07741 there was higher variation in participation in feedback and wrap up sessions.

Table 4. 3:Monitoring and Evaluation

	N	Mean	Std. Deviation
Designing of monitoring and evaluation tools	93	4.5484	.84076
Analysis of data and preparation of reports	93	4.5484	.73004
Data collection during project implementation	93	3.8387	1.17298
Monitoring and evaluation feedback was utilized for improvement	93	3.8172	1.08293
Participation in feedback and wrap up sessions	93	3.7634	1.07741
Valid N (list wise)	93		

4.2.3: Management factors

To examine the influence of management skills on the sustainability of donor funded water projects was the second objective. The table below shows the respondents response

Table 4. 4:Management and Evaluation

	N	Mean	Std. Deviation
Designing of monitoring and evaluation tools	93	4.5484	.84076
Analysis of data and preparation of reports	93	4.5484	.73004
Data collection during project implementation	93	3.8387	1.17298
Monitoring and evaluation feedback was utilized for improvement	93	3.8172	1.08293
Participation in feedback and wrap up sessions	93	3.7634	1.07741
Valid N (list wise)	93		

4.2.4: Community involvement

To establish the impact on community involvements sustainability of water projects funded by donors third objectives. The respondent's response is shown in the table below

Table 4. 5: Community Involvement

	N	Mean	Std. Deviation
I am aware of the exit strategy provided in the design of the project for the sustainability of the project	93	4.3871	.75228
Involvement of community improves their ownership of the project thereby increasing its probability of success and sustainability	93	4.1183	1.01990
I usually encourage other members to develop interest in the project in the success and sustainability of our project	93	3.7527	.94012
I am keenly involved in several aspects of our project	93	3.7419	.95443
The donors in my project actively seek to encourage and perpetuate community involvement	93	3.7419	.98801
Valid N (list wise)	93		

4.2.5: Stakeholders Capacity Building

To find out the influence of capacity building for various stakeholders on the sustainability of donor funded water projects was fourth objectives. The respondent's response is shown in the table 4.6 below. To statements on effect of stakeholder capacity building. Rated on a five Likert scale, the responses were as obtainable in Table 4.6. The low std. dev of 0.86380 indicates that the variation among the respondents was low. The respondents were further in agreement During project identification, selection and planning and implementation local community are directly involved with mean of 4.4194, Participation in donor funded project by community enhances

project implementation and success mean of 4.2473, Stakeholder participation in project ensures sustainability of projects mean of 4.1828, Communities are taken through project implementation policy and guideline during the commission of the new project mean of 4.0860 and Community is involved through cost sharing approach of the project during project implementation mean of 3.8602

Table 4. 6 **Stakeholders Capacity Building**

	N	Mean	Std. Deviation
During project identification, selection and planning and implementation local community are directly involved	93	4.4194	.86380
Participation in donor funded project by community enhances project implementation and success	93	4.2473	.77538
Stakeholder participation in project ensures sustainability of projects	93	4.1828	.77944
Communities are taken through project implementation policy and guideline during the commission of the new project.	93	4.0860	.92849
Community is involved through cost sharing approach of the project during project implementation	93	3.8602	.84173
Valid N (list wise)	93		

4.3: Diagnostic tests

The study used Ordinary least square method for linear regression analyses and pre and post examination test were performed to examine LR model assumption.

4.3.1.:Pre-estimation tests:

This is carried out to ensure normality and multicollinearity of results before fitting the model. This procedure is carried out using two tests, which are explained in detail below.

4.3.2: Schapiro Wilk test for normal data –

The Schapiro Wilk test results for normal data are presented in appendix 111:

The findings above indicate that all variables in the study had a p-value greater than 0.05, hence the study follows a normal distribution making the (OLS) method suitable for analysis of the data.

4.3.3: Pearson Correlation test for Multicollinearity

To avoid a high correlation of the variables used, multicollinearity test were carried out using the Pearson correlation techniques shown in table 4.8 below.

Table 4. 7: Pearson Correlation Test

		Monitoring and evaluation	Management factor	Community involvement	Stakeholders capacity
Monitoring and evaluation	Pearson Correlation	1			

	Sig. (2-tailed)				
	N	93			
Management factor	Pearson Correlation	.101	1		
	Sig. (2-tailed)	.337			
	N	93	93		
Community Involvements	Pearson Correlation	.175	.564**	1	
	Sig. (2-tailed)	.094	.000		
	N	93	93	93	
Stakeholders capacity	Pearson Correlation	.184	.552**	.679**	1
	Sig. (2-tailed)	.077	.000	.000	
	N	93	93	93	93

**. Correlation is significant at the 0.01 level (2-tailed).

The three independent variables are moderately correlated to each other, none had exceeded 0.8, and therefore the OLS technique was appropriate.

4.3.4: Post estimation tests:

Other assumptions can only be ascertained after running the regression. These post estimation tests include Heteroscedasticity – (non-uniformity of errors) and the general behavior of residuals. These tests are important to ascertain that the data used in the study followed normal distribution or whether some transformation is required. The following were the post estimation tests performed and the results thereof:

4.3.5: VIF test for multicollinearity

This test is carried out after regression to confirm the pretest indicated earlier on normality and multicollinearity of data as shown appendix IV

The results of the table above gives a mean VIF of 1.68, which is less than the set threshold of 10 when the variables are perfectly collinear. This therefore confirms that there is no multicollinearity in the data used in line with the pre-test done on the data.

4.3.6: Test for Heteroscedasticity

OLS results are rendered biased if the pattern of errors does not remains constant throughout the observations (Gujarat 2003). This is referred to Heteroscedasticity problem, and to minimize this the residuals were subjected to graphical and non-graphical Breusch-Pagan test after regression. The Breusch-Pagan test tests that the null hypothesis that the error variances are constant throughout the observation unless the results prove otherwise. The results are presented below in appendix V

The results in the table above posted a p value of 0.0005 at 95% confidence level hence the study failed to reject the null hypothesis that the errors were homogeneous and therefore the study concluded that there was presence of Heteroscedasticity in the model.

4.3.7: Histogram test for normality

This study checked for non-normality of residuals using the graphical technique where normality is confirmed when a superimposed curve covering the bar graphs is bell shaped. The histogram test results are presented in appendix VI, vii, vii vix figure below.

The histograms above reveal a bell shape superimposed on the bar of the histogram. This confirms the Shapiro Wilk pre-test that the data used in the study was distributed normally allowing the use of OLS technique for the data analysis.

4.4 Regression Analysis

Toidentify thefactors influencing sustainability of donor funded water projects in Machakos county Kenya**.** The study run a linear multiple regression test to establish the effects of each of thefactors influencing sustainability of donor funded water projects. The findings are discussed in the following sections as shown in table4.11

Table 4. 8: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.923[a]	.852	.845	.24609

a. Predictors: (Constant), stakeholders capacity, monitoring and evaluation, management factor, community involvement

b.

Table 4. 9:Analysis of Variance ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.589	4	7.647	126.273	.000[b]
	Residual	5.329	88	.061		
	Total	35.918	92			

a. Dependent Variable: sustainability of donor fund

b. Predictors: (Constant), stakeholder capacity, monitoring and evaluation, management factor, community involvement

The results in table 4.10 show that the independent variables are statistically significant in predicting factors influencing sustainability of donor funded water projects. The study identified a significant value of p=0.000 showing a statistical significance relationship.

Table 4. 10: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.062	.257		-.239	.811
	Monitoring and evaluation	.052	.049	.045	1.070	.288
	Management factor	.029	.051	.029	.564	.574
	Community involvement	.443	.052	.504	8.544	.000
	Stakeholders capacity	.491	.061	.473	8.092	.000

a. Dependent Variable: sustainability of donor fund

The findings in table 4.10 show the coefficients of the regression. According to the findings, monitoring and evaluations (p=0.288), Management factors (P=0.574), community involvement(p=0.00) and stake holders capacity (p=0.00) and only two stakeholders capacity and community involvements variable were all significant in predicting the factors influencing sustainability of donor funded water projects in Machakos county Kenya since all the p values were less than 0.05. However, as it can be seen monitoring and evaluation and management factor had a p=value of 0.288 and p 0.574 respectively which shows that it was not as significant

as the rest of the factors which had lower values of p. Since a low value indicates high significance of the variable on the dependent variable and vice versa.

The resulting regression equation was:

SCB = -0.62 + 0.491SC +0.443 CI equation (5)

Where,

SCB=Sustainability of donor funded water projects

CI = Community involvement

SCB = Stakeholder capacity building

The findings indicate that when all the factors are held constant the Sustainability of donor-funded water will decrease by 0.62 Units. When all the factors are held constant one unit use of community involvement increases the Sustainability of donor funded water projects by 0.415units. Similarly, the Stakeholder capacity building holds the rest factors constant increases the Sustainability of donor funded water projects by 0.491units. This shows that the utilization of community involvement and stakeholder capacity building have a significant impact on the Sustainability of donor funded water projects in Machakos County.

The study also sought to find the moderating effect of political interference and Sustainability of donor funded water projects in Machakos County, moderation was tested using the interaction variable, which was political interference of the four independent variables, and the moderating variable. The result are presented in table4.14

Table 4. 11:model summary moderating variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.926[a]	.858	.850	.24195

Model		Sum of Squares	do	Mean Square	F	Sig.
1	Regression	30.825	5	6.165	105.317	.000[b]
	Residual	5.093	87	.059		
	Total	35.918	92			

a. Dependent Variable: sustainability of donor funded projects

b. Predictors: (Constant), community involvement, monitoring and evaluation, political interference, management factor, stakeholders capacity

Table 4. 12:coefficient for moderating variable

Coefficient's

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.100	.254		-.394	.694
	Monitoring and evaluation	.037	.048	.032	.765	.446
	Management factor	.016	.050	.017	.328	.744
	Stakeholders capacity	.400	.075	.386	5.352	.000
	Political interference	.119	.059	.122	2.010	.048
	Community involvement	.452	.051	.514	8.834	.000

a. Dependent Variable: sustainability of donor fund

The result in table 4.16 indicated that political interference was a significant moderator in the relation between the four independent variable. This was because the interaction variable was significant (p=045, p<0.05).moreover, the inclusion of the moderating variable in the model did positive significantly change the coefficient in the model.

SCB = -0.1 + 0.4SC +0.452CI+0.119PI equation (6)

Where,

SCB=Sustainability of donor funded water projects

CI = Community involvement

SCB = Stakeholder capacity building

PI= Political interference

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the summary, findings, conclusion and recommendations on the factors influencing sustainability of donor funded water projects in Machakos county Kenya.

5.2 Summary of the study

This explains the finding based on the study scope. The study found that Monitoring, Evaluation and Control are key elements for sustainable growth and development of donor funded project in bid to fight poverty. The 20 projects undertaken in Machakos County, their success relies on accountable management and involvement of community.

5.2.1 Monitoring and Evaluation on sustainability of water projects

The first objective of the study was to determine the effect of monitoring and evaluation on sustainability of donor-funded projects. The results agree with that of Standish Group Project Chaos Report (2005), argues that failed policy and governance structure to cub misuse of donor projects funds is chief reason of failed and stalled projects that are meant to benefit society. Barasa (2014) further points that managers are more concerned with their interest as opposed to donor project primary responsibility hence they will always exploit monitoring, evaluation and control policy loopholes. This calls for adequate checks and balances and liaison with government law enforcement agents if there is breach of trust and accountability

5.2.2 Management factors on sustainability of water projects

Management of project requires prudent utilization of resources available, organization of people and expertise-analytical and conceptual of managers. Project donors, managers and community must emphasis on good management both in personal and policy-oriented framework to cub misuse of resources. Good governance must be in a documented policy and enforceable laws to bring into books those who embezzle funds meant to uplift the community living standards. This entails collaboration with government law enforcement agencies.

Lekorwe & Mpabanga, 2007 argues further that accountability and transparency are key factors to consider for the donor-funded projects. Project managers must take training and development of stakeholders to ensure dissemination of cost benefit information to the society for the project to have sustainable impact in society. This ensures development of human capital to enable society to later take up the project and mitigate conflicts of interest in amicable manner. Project should always have a projection in near future for the community to undertake its management and control in full capacity to realize full bundles of benefits to the community.

5.2.3 Community participation on sustainability of water projects

The study assessed how individuals, families, or communities assume responsibility for their own welfare and develop a capacity to contribute to their own and the community's development by being involved in the decision-making processes.

Bajracharya et.al (2005) states that success of project is influenced relative by cost benefit factors of the community.

5.2.4 Stakeholders Capacity Building on sustainability of water projects

The fourth objective was to find out the influence of capacity building for various stakeholders on the sustainability of donor funded water projects. Capacity building entails acquisition of requisite

skills and expertise to appreciate and manage the project effectively and efficiently. The study revealed that during project identification, selection and planning and implementation local community are directly involved in the project. Participation in donor-funded project by community enhances project implementation, success and sustainability of projects. This agrees with (PEPFAR, 2000) that capacity building is an evidence-driven process of strengthening the abilities of individuals, organizations, and systems to perform the core functions sustainably, and to continue to improve and develop over time.

5.3 Conclusion

The findings of the study revealed that capacity building influences stakeholders' participation in monitoring and evaluation of water projects. The findings indicated there were limited training workshops and seminars and poor attendance of relevant stakeholders.

The training opportunities are limited and coupled with lack of well-coordinated capacity building strategy within the county government of Machakos. The project staff and the stakeholders have low prospects of improving their monitoring and evaluation skills and competencies. The training workshops and seminars did not provide opportunities for stakeholders to acquire enough technical skills and knowledge required for monitoring and evaluation of water projects.

The study revealed that failure to embrace stakeholder training and learning culture contributed to low stakeholders' participation in monitoring and evaluation of water projects.

The study revealed that attitude of the community affects sustainability of water projects in Machakos County and the community members have the willingness to conserve the project area and that they willingly also provide suggestions and opinions to better the project.

5.4 Recommendations

The study recommends for the need to sensitize the beneficiary households through civic education to participate in the monitoring and evaluation process as a way of checking excesses on the part of the county government.

The water projects should be managed by highly competent personnel from the local community preferably to increase its efficiency and sustainability.

Training (capacity building) on project monitoring and evaluation be undertaken within the county government to enable them properly embrace stakeholders' participation process to include all stakeholders in monitoring and evaluation of county government sponsored projects.

Modern technology should be adopted to increase efficiency through increased budgetary allocations.

Collective measures should be taken to deal with persons vandalizing the community water project. This should be coupled with improved security offered by the security agencies to mitigate the cases of vandalism.

The study also recommends that more ICT applications be used in the water resources management and climate change adaptation because they play an important role in shaping the water sector towards responding to climate change. The study further recommends that the organization should adopt more applications for stronger integration in water resource management.

5.5 Recommendations for further Studies

The study recommends that a similar study be carried out in other regional water authorities in the country to establish the sustainability of donor funded projects. Other studies should be conducted on the challenges facing the sustainability of rural community based water projects in Kenya. To enlarge scope of study and applicability of research, future researchers will look on how

community human capital is effective in running of the project to have transformative revenue generation.

Equally, future research need to expand geographical survey to other counties and outside Kenya.

5.6 Limitations of the study

Financial, time constraints and other logistics and which affected the scope of the study made it not possible to take a census.

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SECTION A: DEMOGRAPHIC INFORMATION

Dear respondent this questionnaire aims to collect information about **factors influencing sustainability of donor funded water projects in Machakos county Kenya.** The information given is for academic purpose only and would be treated as very confidential. Please fill the questions by ticking on the boxes or provide opinion according to the question.

Section A: Background Information

1. Gender

Male [ ]

Female [ ]

2. Age:

20-29 years { }

30-39 years { }

40-49 years { }

50-55 years { }

Above 55 years { }

3. Highest Level of Education

O-level [ ]

A-level . [ ]

Undergraduate degree . [ ]

Post graduate Diploma [ ]

Master's Degree . [ ]

4. How long have you been in the organization?

Less than 5 years…..... [ ]

5-7 years …….. [ ]

8-10 years….. [ ]

11-15 years…..... [ ]

Over 15 years…… [ ]

SECTION B: Influence of Monitoring and Evaluation on sustainability of donor funded water projects

5. Please by a ( ), indicate how often monitoring and evaluation is conducted during the water project implementation process up to the completion using the key provided in the table below.

The following is seeking to determine the influence of monitoring and evaluation on the sustainability of donor funded water projects in Machakos County. Kindly respond to the following Likert Scale starting from strongly agree, agree, neutral, disagree and strongly disagree.

Statement	**SA**	**A**	**I**	**D**	**SD**
Designing of monitoring and evaluation tools	1	2	3	4	5

Data collection during project implementation	1	2	3	4	5
Analysis of data and preparation of reports	1	2	3	4	5
Participation in feedback and wrap up sessions	1	2	3	4	5
Monitoring and evaluation feedback was utilized for improvement	1	2	3	4	5

SECTION C: MANAGEMENT FACTORS AND SUSTAINABILITY OF DONOR FUNDED WATER PROJECTS

Relationship between training and sustainability of donor funded water projects on a scale of 1 – 5 where one represents strongly disagree, two represents disagree, three represents neither agree nor disagree, four represents agree and five represents strongly agree?

	1	2	3	4	5
Training and development of stakeholders is key to ensuring sustainability of donor funded water projects					
The level of technical knowhow in management of resources by locals is inadequate					
Analysis of data and preparation of reports					

Projects with consistent training and development in Machakos County are more successful					
Given a chance, I would take part in training and development for our water project					

SECTION D: COMMUNIT INVOLVEMENT AND SUSTAINABILITY OF DONOR FUNDED WATER PROJECTS

13. To what extent do you agree with the following statements with regard to relationship between community involvement and sustainability of donor funded water projects on a scale of 1 – 5 where 1 represents strongly disagree,2 represents disagree, 3 represents neither agree or disagree, 4 represents agree and 5 represents strongly agree?

	1	2	3	4	5
Involvement of community improves their ownership of the project thereby increasing its probability of success and sustainability					
The donors in my project actively seek to encourage and perpetuate community involvement					
I am keenly involved in several aspects of our project					

I usually encourage other members to develop interest in the project in the success and sustainability of our project					
I am aware of the exit strategy provided in the design of the project for the sustainability of the project					

SECTION E: STAKEHOLDERS CAPACITY BUILDING INVOLVEMENT AND SUSTAINABILITY OF DONOR FUNDED WATER PROJECTS

13. To what extent do you agree with the following statements with regard to relationship between stakeholders capacity building involvement and sustainability of donor funded water projects on a scale of 1 – 5 where 1 represents strongly disagree,2 represents disagree, 3 represents neither agree or disagree, 4 represents agree and 5 represents strongly agree?

	1	2	3	4	5
Stakeholder participation in project ensures sustainability of projects					
Participation in donor funded project by community enhances project implementation and success					

During project identification, selection and planning and implementation local community are directly involved					
Communities are taken through project implementation policy and guideline during the commission of the new project.					
Community is involved through cost sharing approach of the project during project implementation					

SECTION G: POLITICAL INTERFERENCE INVOLVEMENT AND SUSTAINABILITY OF DONOR FUNDED WATER PROJECTS

13. To what extent do you agree with the following statements with regard to relationship between political interference stakeholder's involvement and sustainability of donor funded water projects on a scale of 1 – 5 where one represents strongly disagree,two represents disagree, 3 represents neither agree or disagree, 4 represents agree and 5 represents strongly agree?

	1	2	3	4	5
Government policies may delay the implementation of donor funded project					
Political interferences affect location of donor funded project					

Change in political regime affect donor funded project					
Lack of political good will affect donor funded project.					

SECTION H: SUSTAINABILITY OF DONOR FUNDED WATER PROJECTS

13. To what extent do you agree with the following statements with regard to sustainability of donor funded water projects on a scale of 1 – 5 where 1 represents strongly disagree,2 represents disagree, 3 represents neither agree or disagree, 4 represents agree and 5 represents strongly agree?

	1	2	3	4	5
The sustainability of the donor funded project is enhance through monitoring and evaluation of project					
Through involvement of the community in monitoring and evaluation of donor funded project the sustainability of project is promoted					
The sustainability of donor funded project is main determine by level of funding.					

Project sustainability is enhance through beneficially involvement in the identification of project needs and solution.					
Through accountability of donor funding and follow up of problem identification the project sustainability is improved					

APPENDIX II1: Schapiro Wilk Test

```
. swilk monitoringandevaluation managementfactor communityinvolment stakeholderscapacity

                    Shapiro-Wilk W test for normal data

    Variable |   Obs        W          V        z       Prob>z
-------------+--------------------------------------------------
monitoring~n |    93    0.97918      1.619    1.064    0.14368
management~r |    93    0.96981      2.347    1.885    0.02974
communityi~t |    93    0.96744      2.531    2.052    0.02009
stakeholde~y |    93    0.96780      2.503    2.027    0.02132
```

APPENDIX IV: *VIF TEST*

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
communityi~t |      2.06    0.485166
stakeholde~y |      2.03    0.493294
management~r |      1.59    0.628790
monitoring~n |      1.04    0.960959
-------------+----------------------
    Mean VIF |      1.68
```

APPENDIX V:TEST FOR HETEROSCEDASTICITY

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

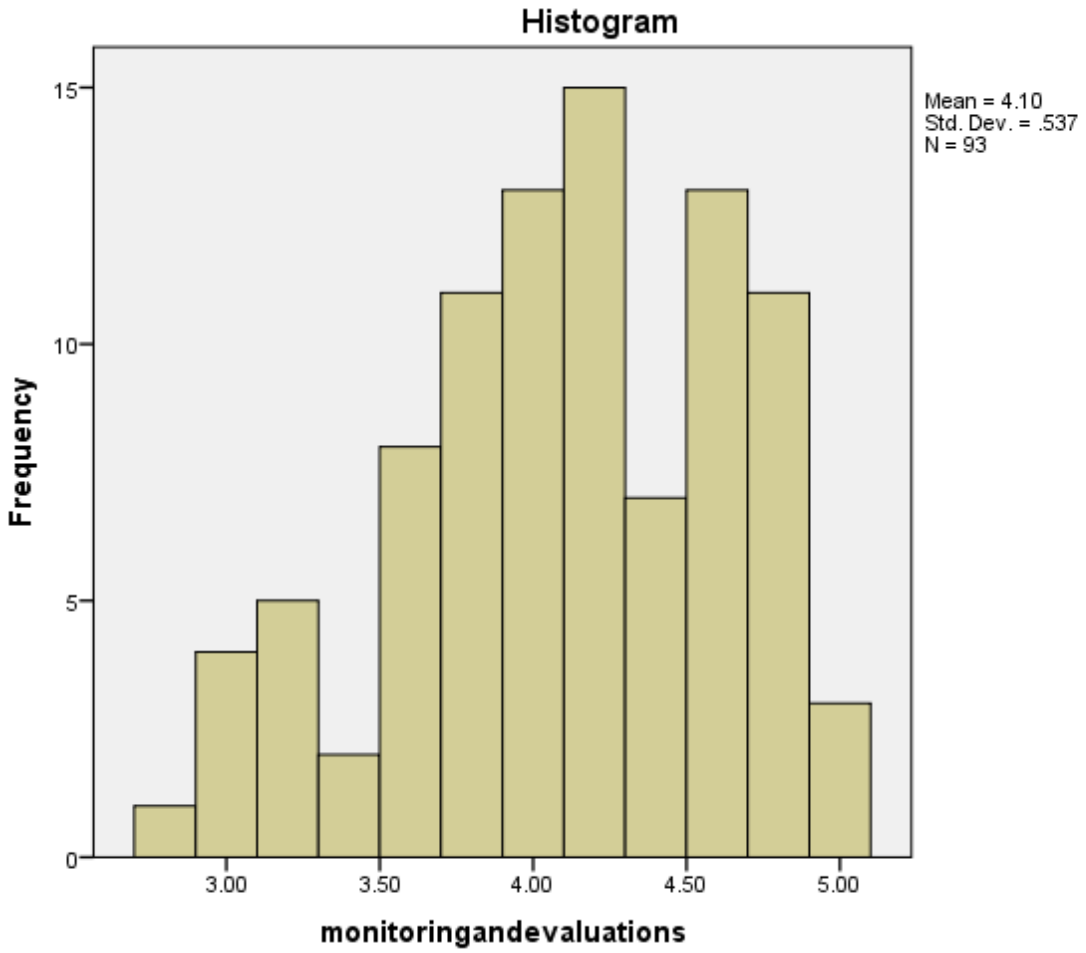
Ho: Constant variance

Variables: fitted values of susatainabilityofdonorfund

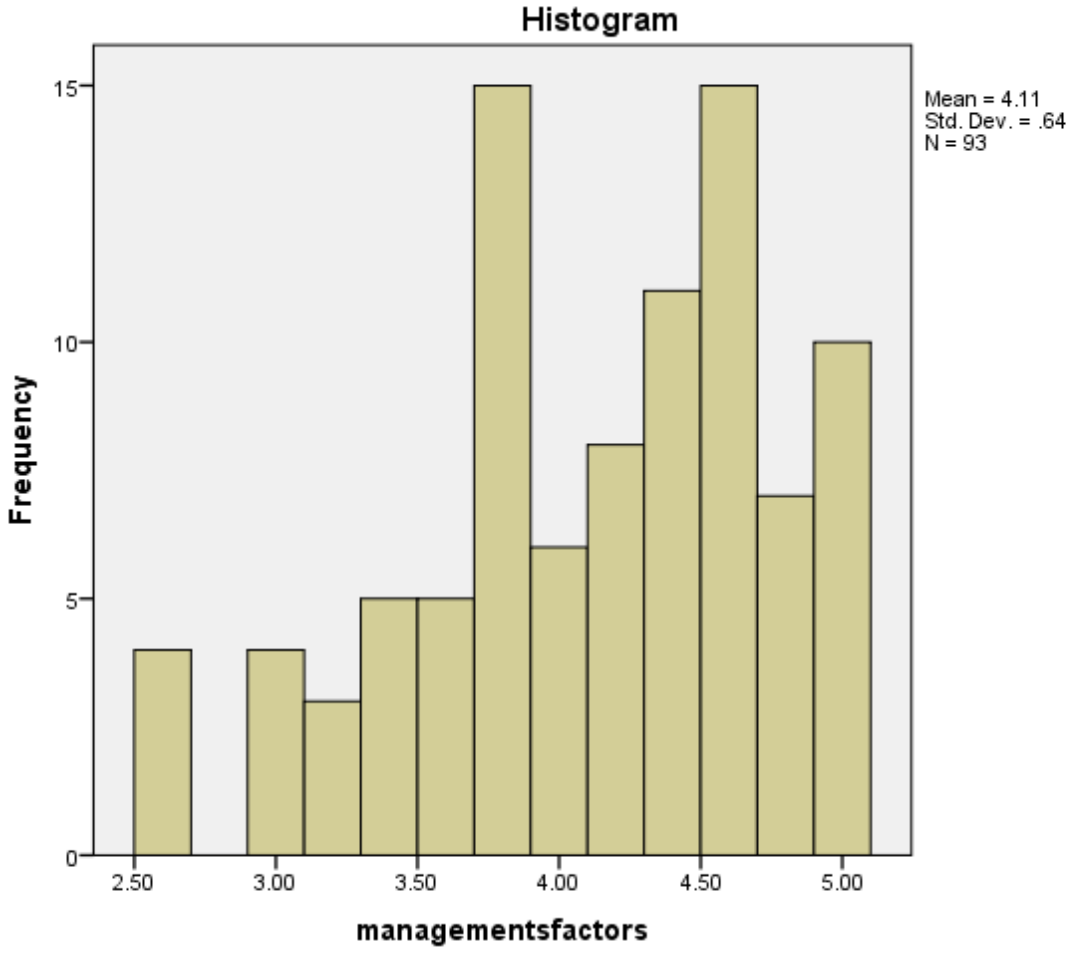
chi2(1) = 12.09

Prob > chi2 = 0.0005

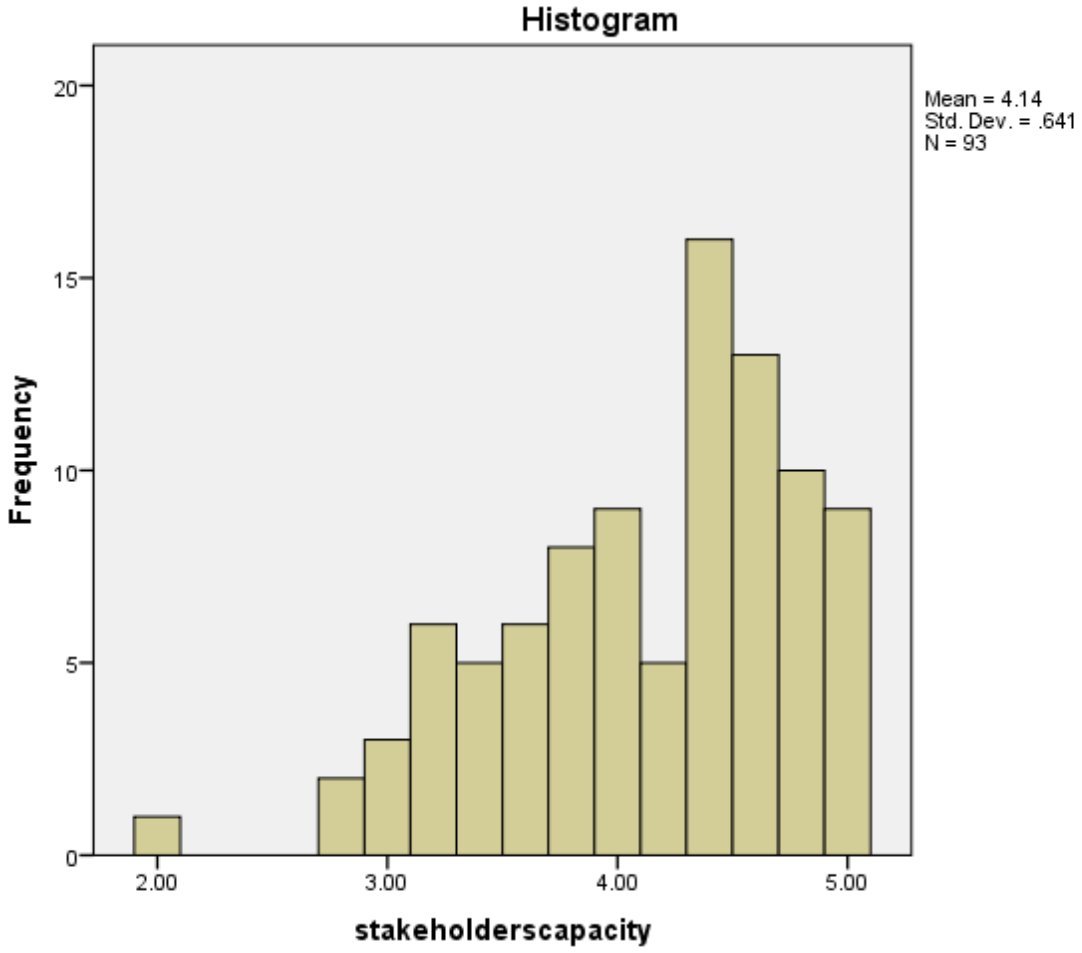
APPENDIX VI : HISTOGRAM – MONITORING AND EVALUATION



APPENDIX VII: HISTOGRAM – MANAGEMENT FACTORS



APPENDIX VIII : HISTOGRAM – STAKEHOLDERS CAPACITY BUILDING



APPENDIX IX : TARGET POPULATION

Water Project	Officials	Members
Matungulu Water Supply Project	3	4
Masinga Water Supply Water Project	3	4
Mungala Borehole Water Project	3	5
Kasaini Borehole Water Project	3	4
Kiandani Water Project	3	5
Uamani Water Project	3	4
Mbevo Kiitini Water Project	3	3
Mutituni Earth Dam	3	3
Kyanzasu Borehole	3	4
Unyunzu Water Project	3	4
Mbembani Borehole	3	4
Kya Watia Earth Dam	3	3
Manza Borehole	3	3
Kyuuni River S.S. Dam	3	3
Kwa Mwavu Earth Dam	3	4
Metuma Borehole	3	3

Musilili Borehole Water Project	3	4
Mwanyani Borehole Water Project	3	3
Kyaani Borehole Water Project	3	3
Ngengeta Water Project	3	4
	60	**74**
TOTAL	**134**	

Source: County Government of Machakos statistics (2018)