# FACTORS INFLUENCING SUSTAINABILITY OF COMMUNITY BASED PROJECTS IN KENYA: A CASE OF KIIRUA KATHITA WATER PROJECT IN MERU COUNTY

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### ABSTRACT

The Sustainability of community based projects is always a very sensitive area for the success of projects but lately has not been taken into account. It is important to ensure the projects is sustainable to meet the needs as to why it was incorporated. To ensure this takes place for successful maintenance of projects there was need for considering common factors influencing it. The study aimed at improving the sustainability of community based project as intended. It was then developed due to the unsatisfied community people who were not able to access water yet the project was implemented. The specific study objectives in this case include community participation, projects level of training, monitoring funding. and evaluation. Many studies have been in the past conducted regarding sustainability of community based projects and since it is a crucial sector in development, hence adapted some theories like McClelland Achievement need change theory, theory of change and Freirean Theory of Dialogue. Both qualitative and the quantitative methods of research were used whereby the study population involved the water project beneficiaries within the community, the staff, the stakeholders, ministry of water governmental departments and the entire county of Meru related water offices. Sampling proportionate random sampling technique was used to collect samples for data purposes. The target population for the study was 267 with Kiirua village members being 260. community representatives 3 and 4 key informants. From that target population, a sample size of 80 was drawn using the simple random

technique. sampling Open ended questionnaires were used to administer samples to the respondents involved for them to fill them, from where the study information was gathered for findings. For the questionnaires 70 were filled and returned and 10 were not returned for findings. The study used secondary sources of information like journals, articles and books from other researchers and the internet to refer to other sources based on community based projects. Quantitative and quantitative data were analysed using the methods of Statistical Package for Social Scientists (SPSS) and presented using frequency distribution tables and figures. Based on the findings, community participation greatly influenced the project and also brought a sense of ownership to the project beneficiaries. The study revealed that funding of the project had an influence on adequacy and allocation of funds disbursed to cater for operations within the project for sustainability. Many respondents also revealed that during monitoring and evaluation of the project, they were not involved hence were not aware of its progress. Training indicated that expertise was greatly required by the projects stakeholders to make them familiar with the processes through experience to avoid any mismanagement. The findings also indicated there was a correlation between independent and dependent variables on sustainability of the Project. The study therefore recommends that community participation should be highly recommended since they contribute a lot for the success of the project, also funding through disbursement and allocation of available funds should be done adequately for the continual. Training is important for

people to express their expertise in various areas of operation. For monitoring and evaluation it recommends that the community awareness of the project success should be taken into account to bring understanding on its progress for the sake of future planning and get to find solutions to arising project problems.

Key Words: sustainability, community based projects, Kiirua Kathita water project, Meru County, Kenya

#### **INTRODUCTION**

Community based projects are developed to benefit the public , like in this case of Kiirua Kathita Water project it's raised to provide water for both domestic and economic use. In the process of bringing up the community based projects, where the community members were involved in participation, there was fostered togetherness and teamwork hence maintaining and financing the project which ends up being beneficial to the people and meeting up its sustainability levels. Therefore, a community may be well defined as a unit of settlement with people acquiring the same values and characteristics. When they find need for something, and decide to bring it up in a systematic manner to achieve their goals and objectives in a given time period, they refer to it as a project.

Therefore when a unit of settlement is aimed at meeting specific objectives in a defined time frame, as they manage and fund it can be identified as community based project. When they then decide on terms to ensure its durability and meeting of its purpose without compromising future generations' needs and continue life after they term it as being sustainable hence the concept of sustainability (Asheim, 2011). When the fostered teamwork is maintained there's ease of communication and sharing of resources among them being labour which they leverage in usage and all community members therefore are focused toward the sustainability of their beneficial project.

Some other examples of community based projects education, health, agricultural and infrastructural projects among others. For instance in Kenya, many rural defined projects fail to be accomplished due to poor funding, lack of training to the beneficiaries, corruption and poor management which lead to the highly demanded community facilities in their trust funds not being accomplished efficiently and effectively.

#### History of Kathita Kiirua Water Extension Project

Kathita Kiirua Water Project is a community based project implemented to cover up the communities within Meru County in Kenya. It's a water project funded by the Community Development Trust Fund which was established in 1996 as a result of financing agreement between the government of Kenya and European Union. Since its year of establishment CDTF became part of the Ministry of State for Planning, national development and vision 2030 also known as Ministry of Devolution and Planning. Throughout the years the government of Denmark and European Union always funded CDTF and its projects through this action taken by the CDTF there's reduction of poverty by encouraging communities to

participate and implement projects which are either environmental based or socio-economic infrastructure for better coordination and governance of the community projects intended to satisfy their needs and wants (Homan, 2009).

Community Development Trust Fund has two components, the Community Development Initiatives (CDI) which is involved in social and economic infrastructure projects like health, water and sanitation, agriculture among others. The other component is the Community Environment Facility (CEF) which deals with supporting community projects that are aimed at poverty reduction hence improving people's livelihood and conservation of natural resources through environment management and governance. Therefore our case Kathita Kiirua water project is under the CDI (Constitution, 2004).

There was an organisation by the Little Sisters of St. Theresa based at Kiirua who came up with the idea of starting Kathita Kiirua water extension project in the year 1990. They observed the distance the community members used to go in search for water at the Muruiya springs currently Ntharagwene Water Association and Uruthiru catholic community distributed to apostles of Jesus, Nazareth Noviciate at Mboroga and at Kiirua St. Theresa hospital.

Through the prolonged search for water the standards of living of the community people became poor because they contacted diseases due to lack of clean water, much time searching and queuing for water was also a threat and also less productivity was experienced because much of the energy was dedicated on searching for water rather than other chores to cater for the family needs. The people therefore ended neglecting other responsibilities and left them unattended to. The little sisters then shared the idea to an Italian NGO for funding of its study and implementation which was referred to as CEFA. According to the (Constitution, 2004) Italian government through the ministry of foreign affairs secured Kshs. 221 million in 3 phases for the project.

After the feasibility study the initial work involved construction of an intake and a sedimentation tank then followed were the distribution networks. After completion of the works they later noticed and realized two communities Kiirua and Marurui still had to go for long distance in search for water and therefore they took more action in handling the matter. The community later suggested via a proposal to CDTF to upgrade the water system, improve water tanks, and construct water kiosks for easy access of water to improve the households that lacked that opportunity. Therefore this project is aimed at providing adequate sources and supply of water for domestic and economic use. The water metered to the users is then charged at a fee used for the maintenance of its operations and sustainability hence strengthening project management. A study by (Wangui, 2017) shows there is the need to study the gaps that still bring in lack of stability and sustainability to the established community project of Kathita Kiirua Water Project.

#### STATEMENT OF THE PROBLEM

Many projects in Kenya tend to be unsustainable hence leading to poor performance (Madrigal, 2011). This is due to many factors influencing like poor management, training, monitoring among many others. Some projects have been either initiated by the government or NGO's. Therefore it's important to look out what exactly causes the unsustainability of the projects and how to curb it. Many other researches have been conducted in the past but the issue of sustainability has not yet been settled (Kirigha, 2016). With many other researches regarding sustainability of community based projects, there still has been more left out and the gaps are therefore identified in this study. According to (Onkoba, 2016), a study was conducted on Carolina a Kibera projects on its sustainability as a community based project and the determinant factors discussed still have not satisfied the very levels of unsustainability experienced on community based projects in Kenya a similar situation experienced in this very study on Kiirua Kathita Water Project. Despite the establishment of many projects example being in the health, education, agriculture and water sector among others, that have been suggested, implemented and executed the impacts meant to be achieved have not been felt because there was never total satisfaction to the intended beneficiaries. This may be contributed to corruption among other factors. Therefore this research in the case of Kiirua Kathita water project, seeks to investigate factors influencing sustainability and performance and to know the desired results and feel its benefits even after the exit of its implementers. One of the important role attributed by community based projects are fostering participation and teamwork, health securities, increased economic income hence improved living standards, socialism among others. Despite these roles being played still many projects haven't performed as expected by their donors, stakeholders or the government. Therefore more concern should be taken into account to ensure their sustainability and good performance. This study factors focused bring about the gaps in sustainability (Wangui, 2017).

#### PURPOSE OF THE STUDY

The purpose of this study was to investigate the factors influencing sustainability of community based project a case of the Kiirua Kathita water project in Meru County.

#### **OBJECTIVES OF THE STUDY**

- 1. To determine how community participation influences sustainability of community based project.
- 2. To determine how funding influences sustainability of the community based projects.
- 3. To determine how training influences sustainability of community based projects.
- 4. To examine how monitoring and evaluation influences sustainability of community based projects.

#### LITERATURE REVIEW

#### Sustainability of Community Based Projects

According to a study by (Brundtland, 2005), sustainability is development that meets the needs of the present without compromising the ability of the future needs. Conclusions by (Abraham, 2017), states that the sustainability of water projects is the continual of water to flow without interruptions of its flow rate or quality away from how the system was designed. By the services continual without the project getting distracted, then he believed sustainability was put in place. Sustainability is not a single day process but a lifelong process aimed at attaining its intended achievements. Community based projects have been faced by challenge of getting unaccomplished hence rendering them unsustainable (Demarche, 2001). With sustainability comes along with clean and safe water that is naturally generated as is the only way it can be reliable and adequate hence prolonged supply (Poizot, 2011).

According to (Enshassi & Al-Ghurazi, 2006) a conclusion was made that sustainability of water projects meant that water supply services including all operations are continued and offered satisfactorily to the expectations of the people. He further said and pointed that sustainability was the ability to operate and maintain high projects services levels. However, to get this achieved, there was need for planning from the initial project phase and ensure it had a long-term durability in the right working conditions and well maintained. With sustainability concept there were the three pillars which entailed economic, social and ecological development which are concepts popular in Kenya and Africa for sustained planning and developing of all sectors involved. This study therefore was based on real experiences or scientific experiments rather than on theory.

Sustainability is an everyday discussion because without it some generations will be compromised and lack the opportunity to utilise some set projects or their resources something that makes it difficult to define at whatever level. According to (World Bank , 2005) sustainability is development that meets present people's needs without compromising their future generations' needs.

Sustainability concept can be traced back in the 1970s and made known by World Commission on Environment Development (WCED) of the United Nations, whose concept is based on the foundations of economic theory ( environmental limit theory) by (Thomas &David 2000) and their argument shows that we live in a finite environment. To acquire sustainability there's needed to ensure environmental conservation in order to avoid compromising future generation's needs by making it extinct. Poverty has been a great factor that has been associated with poor sustainability. When people live well in the environment and harmoniously without interfering with it is termed to be sustainability (Garrity, 2004).

This concept mainly dealt with the social (how people relate with each other to perform expected goals), economic (how able one is, affordability of the basic human needs and availability or reachability of resources) and ecological (the environment at large) development factors which are delivered together according to the systems theory. Many

other studies have been developed to explain the various scenarios sustainability has been criticized on. To enhance and improve sustainability of community based water project (Russi, 2013), argues that sustainability of project services were to be noted if water sources are not overexploited, facilitation in maintenance put in place and ensuring availability and reliable source of funds and ensuring involvement of all beneficiaries in all stages.

Sustainability is a concept that has lately been taken seriously regarding the various developments undertaken. Therefore most funded projects needed to ensure sustainability in order to express gratitude for the project existence, before and after its completion. All the projects stakeholders (donors and beneficiaries) were therefore more concerned from the designing till implementation of the community based project. Therefore this project targeted the beneficiaries on their capability to maintain and sustain the projects result under Kiirua Kathita Water Projects by the little sisters of St. Theresa.

#### Influence of Community participation and Sustainability of Community Based Projects

Participation by the community involves help by the beneficiaries of a project by involving them to help in its continuity and attainment of its purpose (Umesi, 2005). 'With participation approach, beneficiaries and stakeholders influence project activities like decision making and planning among others. General involvement is highly encouraged for the beneficiaries to be self- reliant in meeting basic needs and making the project development self-sustainable (Kasiaka, 2004). For sustainability to be assured in a community based project there is need for community participation which involves the members of the community offering their integrity, resources and their talents towards sustaining and maintaining the community project (Ohwahwa, 2009).

Sustainability of water systems is achieved if the responses on capacity building, cost sharing and direct involvement of the community to participate is encouraged and developed (USAID, 2009). Community participation does not only major on sharing of project benefits but involvement of groups that help in decision making regarding the project. Therefore according to, (Kamal, Ashraf and Kaamal, 2017) he proposed community participation goals that involve increasing project's sustainability both effectiveness and efficiency, project cost sharing, beneficiary capacity building and empowerment which lead to sustainability of projects. For effective project management cycle, the project stakeholders are vital in project decisions based on relevant and sufficient information regarding the project hence its sustainability (Gawler, 2005). It has been experienced that many projects decisions are assumed and not taken seriously due to lack of reference from the beneficiaries and stakeholders hence end up being unsustainable (Nyaguthii & Oyugi, 2013).

With community participation locals are not marginalized as it would be without their involvement due to assumption that the marginalized locals lack knowledge on the project. For active participation therefore there are stages developed (Leah , 2016) which include initial, planning & design, execution and monitoring stages of which value addition is expected at every stage for sustainability. This project is mainly brought to the locals not only to improve their living standards but also to bring quality in their lives. It is unfortunate and

not clear as to why many intended beneficiaries don't get involved or lack the capacity to participate. Many researchers who get involved seem to understand that community project management capacity is critical and very important for a well performed project outcome through community beneficiaries' participation (Shikuku, 2012).

Therefore, to ensure this takes place, it is important to ensure full participation to achieve that one target. In implementing the project it is necessary to consider those devastated more in poverty and bring growth to them to bring empowerment and improvement in their lives (Hall, 2003). With community participation there is promised development related to the improvement, growth and increments. It generally signifies how improvements are encountered from undesirable to desirable results. Participation therefore brings togetherness and cooperation between different people where different minds work together and develop principles that govern them.

Away from the involvement and participation it is seen that community participation and the participation outcomes are realized and manifested at different project stages in the project life cycle (Carol, 2001). This is therefore followed by transparency and accountability of responsibilities. Also there is need for equality in sharing of responsibilities especially to the vulnerable, women and children who are part of the benefiting community who should also be involved. Therefore if participation is encouraged and put in place, there is ease in flow of information, coordination and flexibility of activities. Therefore leadership positions in Water Committees are inevitable according to (Institute for Sustainable Futures, 2010).

In a study by (Mutwiri, 2016) indicated that lack of community members awareness on the participation influenced implementation of water projects in Meru county and affecting accessibility of water negatively. Also (Mwakila, 2008) did a study and found out how regional government upheld community participation to help in implementation of water projects in Tanzania through which there was provision of labour, low wage rate and raw materials for the use in project implementation.

To ensure sustainability of a community based project cooperation is needed between the locals and donors. Lack of cooperation or participation leads people to social problems, unemployment and other social vices that may pull the community back with no developments. According (Poplin, 2009) analysis of the community action into different events is considered very important. One, he views the event of actions as way of solving problems related to the locality like water project by creation of tanks or health clinics to ensure that their needs are catered for. It is the responsibility of all participants to contribute in implementing towards achievement of projects results. According to (Ssengendo, 2008) he also describes integration where community participants are unified and work harmoniously towards achievement

With participation there is assured teamwork that creates awareness between community locals. A study by (Esonu &Kavanamur, 2011) on how community participation influenced the success of water project implementation by the Wampar Local-Level Government in Morobe government in Papua New Guinea, showed various methods the community

participated for the project benefit. Some of the findings being, provision or required raw materials, cheap waged labour and M&E involvement (Esonu &Kavanamur, 2011).

It has been found out that participatory approach in community based projects brings high productivity and sustainable returns though it takes time, resources and confident in attaining. Therefore participatory approach or development brings in strong national and international perspectives (Jean, 2005). Therefore it should be clear that stakeholders must be involved at various stages in the project management life cycle, who are the beneficiaries of the CBOs which are the associations of community members to reflect their interests (Commission of the European Communities, 2006). Not all views of the community participants are taken into account when implementing the projects activities.

On the other hand, (Lipsky, 2010), Observes and concludes that community participation has its shortcomings like fight for power influencing equity and efficiency and also affects time consumption which happens before the people accommodate and understand the project, maybe complex at various stages of the project and brings about conflict of interest among the locals. A study be the (Institute for Sustainable Futures, 2010) too much involvement of the community mass for decision making delays decision making. Thus, it's important to employ expertise to determine who will participate and the demands required compared to what is set by authorities (Abel, 2007).

#### Influence of Level of Funding and Sustainability of Community Based Project

Funding is the actual action of financing or making available resources required to undertake a project. It is very important for funds to be allocated in the budget as is a good element of financial management that shows the expected income and expenditure to avoid misuse of funds set for the project. Therefore a budget is the controller of the project activities for the project (Petersen et al., 2006). With a budget for the project, transparency is expressed as there is trust and commitment with regard to the project continual.

Level of funding is a contributing factor to the sustainability of community based projects, this is because through the policies prepared and presented, it will be important to know what is being funded and the duration it is being funded (Koch, 2015). The study will consider allocation of the required time and the resources to determine how the funding will be done. Project benefits will not be produced without or with inadequate resources, therefore involvement of financing process that will include contribution of adequate funds for the project structures to ensure its sustainability. With insufficient funds the projects will not be well maintained leading to its failure (Reed, 2006).

The financial support will be given by the beneficiaries of the project, donors, its stakeholders or the government. The commitment these parties have towards financial resources is an important factor towards the project value to its people. (Harvey, 2004) states that with funding of the project comes up with other factors like technological factors that are choices regarding type of project which need to be put into consideration. If these parties work towards stabilising and maintaining the projects, it will help increase availability of resources

and will expand the project benefits and this will need coming up with responsibility and accountability (Green, 2005).

In developing projects, funding is a necessary factor to be put into place because it acts as the foundation for the project capital needs which involve costs of equipment's, labour and materials that ensure the project performs as intended and meet its goal within the set time for completion. There are therefore many necessary types of costs involved in financing projects like direct and indirect costs, sunk cost, fixed and variable costs among many others which depend on the type of projects being implemented. In order to ensure sustained financial resources there is need to determine real cost required for the supply of the community project (Fonseca and Njiru, 2003) . This in turn will help the community and make them aware of the financial commitment so as to plan for it, implement, and execute community projects by choosing best technology to apply and identify external financial support required to aid in completion (Harvey, 2004). Complete project life cycle accounting methods are used to ascertain the total costs involved. By this, there's clear understanding on benefits and burdens associated with the project. Finances to be required depend on these costs.

Therefore it is a major problem where sustainability is difficult to achieve even after the completion of the project since the local community may not easily manage them. Therefore, it is very important for the beneficiary community to generate the resources required to bring the project to a stand and support it, even after the exit of the stakeholders. Through this contribution, it will help show the desire for the beneficiaries to own the project but it does not imply the community is the one to bear the financial burden of the project but shows that some contribution by the beneficiaries establishes their commitment which with time increases as the water project supply increases to more locals (Sebsibe , 2002). Beneficiary contributions are of many ways apart from cash itself. It can be labour, resources or even energy spending toward its achievement. On the other hand, willingness to contribute is not a guaranteed sign of ensured sustainability (Green, 2005).

However, provision of sustainable water project is not properly guaranteed until there is proper funding since the costs to be incurred which include operation costs, repair and maintenance costs among others that ensure stability of the project (Zimmerman, Egel & Blum, 2016). The needed cost recovery efforts is the key determinant of project sustainability and its influenced by the extent to which individual community beneficiaries are supported, retrained and guided regarding financial management. If external guidance is missing then it means that the cost of recovery effort will diminish slowly over time. A study by (Martinez-Vazquez, 2003) observed fiscal decentralization leading to delay in disbursement of projects finances hence influencing the implementation of the projects.

Another study by (Ahmad & Mercedes, 2006) shows how late disbursement influenced implementation of water project in Peru which the results from the findings were late payment of wages and interference in purchase of raw materials. As researched, with a total of 31 million Peruvians, 3 million did not access to safe water and 5 million lacked access to improved sanitation. The study showed that out of the total population there were 5 partners who were to issue finances but there was no record of the loans disbursed despite having the

loan partners. (Bartolini, 2009) observed how the high level of corruption among politicians in Italy was to blame for poor or no funding leading to insufficiency of resources allocated for the water project. In a study in Kenya by (Adek Teresa, 2016) shows that insufficient financial resources influenced implementation of water projects, this being due to how allocation of funds by national government to the devolved counties a Case of Mombasa county in Kenya.

#### Influence of Training on Sustainability of Community Based Projects

Training is the process of acquiring skills and experiences to gain expertise and awareness. Therefore for a sustainable project it is important to give the skills to the project beneficiaries, stakeholders and those directly and indirectly affected by the project. Trained personnel are perceived to be more efficient in undertaking assigned tasks during the operation. For the water project it is important and very crucial for maintenance and operations to avoid mismanagement and system breakdowns. By training it helps show how professional one is in activities such as water treatments at the source, identifying catchment areas and also record keeping and customer relations especially for the ones at the kiosks since at times there can happen to be a complication or breakdown of the system. Training will help identify who fits well in a certain position. When sufficiently trained there will be reduced loses on resources, time and money hence help strengthen the aspect of sustainability (Kerzner, 2017).

According to (Mbabazi, 2016) the study shows how the management committee is formed and training of its members to avoid mismanagements and unwanted breakdowns. They also undertook another study and involved (Shukla, 2017) on influence of training on sustainability of water project in Rwanda, Gahondo village. Some of the responses recorded showed that training really affected ownership of water project in the area since operations and maintenances really needed expertize.

#### Influence of Monitoring and Evaluation on Sustainability of Community-Based Project

Monitoring is the progressive process of gathering information about a project to check its performance based on the set objectives. Evaluation is the collection, analysis and interpretation of projects information to check performance based on objectives hence making it a vital tool for management in the project management (Mulwa, 2007). Monitoring and evaluation therefore, help in identifying the needs contributing to the empowerment of the stakeholders. (Thea, Hilhorst & Irene Guijt, 2006) suggested that M&E is an instrument for control and enhances improvement of performance for the project. It is therefore undertaken at all stages of a project. Therefore aims at collection and selection of appropriate information to make reports summary to help in decision making. Monitoring and evaluation should be undertaken effectively and efficiently to obtain accurate results that answer the required questions. M&E described, helps project managers improve their performance and achieve results (Mulwa, 2008).

By acquiring the desired results from the analysis, it will help identify problems that will be acted upon therefore reducing the chances of project failure therefore, it's very crucial in

sustainability of the community based project. M&E is associated with co-ordination at the various levels to avoid any project hindrances. By reporting the results of project progress it helps promote accountability and transparency which will foster trust between the various beneficiaries and stakeholders and ensure avoidance in misappropriation of project resources. For the CBOs there is the importance of ensuring management by participatory monitoring and evaluation by achieving results and sustainability. This therefore, makes it important for the government and other stakeholders to ensure implementation of M&E structures that help the project meeting its goal Zhang *et.al* (2011). This therefore promotes efficiency and effectiveness in project implementation.

According to (UNDP, 2012) M&E helps take corrective measures while implementing a project and ensure meeting of project goals. (Mukunga, 2012) researched on performance of Kiserian Dam, Kenya and used both qualitative and quantitative research and found out that 80% of respondents didn't participate in M&E and only 3% had access to the progression reports of the dam. This created a clear indication of poor or no monitoring and evaluation by the beneficiaries of the community hence, not aware of the decision making projects progress which ended up influencing the sustainability and success of the project in relation to its objectives. Therefore it is important involving the community in participatory monitoring and evaluation by the locals who are the beneficiaries.

# THEORETICAL FRAMEWORK

Various researches therefore showed that community based projects sustainability had in the past been looked at but there were gaps left out hence bringing lack of project satisfaction. Various theories from these researchers therefore explain more on project sustainability. This study was based on three theories which are McClelland Achievement Needs Theory, theory of change and Freirean theory of dialogue.

Need for achievement (McClelland, 1961), explained that all human beings have a right to have a need of success, accomplishment and to excel. This need then is the one that motivates one to achieve their intended activities and goals. This developed theory helps in identifying peoples motivating drives. David McClelland built up his theory on Abraham Maslow's hierarchy of needs theory in his book "The Achieving Society" which identified three motivators which are need for achievement, need for affiliation and need for power which he believed everyone had. He stated that regardless of the gender, culture, age they are the dominant drivers which are reliant on culture and life experiences. This theory was of great importance to the study because it helped identify areas of need according to people's interests and made ways to make them successful by accomplishing them. By acquiring this theory, the information helped set goals; provision of feedback and adoption of rewarding as a way of motivation.

Theory of Change describes how important it is to bring about long term goals. Community based projects often have ambitious goals, therefore it's important to get these theory at hand. Theory of change often provides a framework in developing and implementing illustrations

on how and why there is a desired change and expected results. Through this it's now easy to enter the change process for the project. The project adopted this theory and helped the project initialize ways of acquiring ideas and turning them into long-term achievable goals that were meant to bring the community change.By applying the theory trust was built between the project members because everyone knews what was expected of them and helped in accountability of the results. The theory of change was applied also in developing methodologies required in measurement of the project indicators and helped ensuring everything was put on track as expected and brought understanding of the new change required. It was helpful to the project's stages through monitoring and evaluation in assessing data on the project performance and also the initial planning stages of the project

Freirean Theory of Dialogue and Society was developed by Paulo Freire's which stated how dialogue is important between leaders and the community. (Freire, 1997) With the dialogue, there came up with critical thinking that made it possible to acquire some routines that addressed their needs for the projects regarded good to them. Freire's emphasized that dialogue is reflected in the project since the continuity and provision of its desired needs are still hoped to continue even after its completion. It is therefore important to involve the community members in the various projects stage including monitoring and evaluation for it to be maintained and therefore sustainability will be achieved. This Freire's theory emphasises on dialogue because it creates a forum for sharing by learning from each other through which opportunities are created. It helps in critical thinking hence the confidence to approach each other. Therefore for the project, dialogue was a great tool for the project success since it encouraged communication between community members, donors, beneficiaries and all participants of the project. It helped foster understanding and togetherness.

Adapting this dialogue theory by Paulo Freire's helped the project in adopting critical awareness for their actions which was to change reality through realizing the projects needs and wants necessary. Paulo also in the theory, stated how codifying the real situations and people was important aspect really important for the project because it was able to build up an image of the projects people and necessary projects situations hence bring understanding of their necessities to be put into great consideration. He also pointed out on the concept of knowledge which for the project helped the people be more educated for the project's success by getting them knowledgeable.

# **RESEARCH METHODOLOGY**

# **Research Design**

Research design is the specified methods and procedures for acquiring the needed information. It's the overall framework of the project that shows which information is collected and from which source and with what procedures. The research design used for this study was descriptive research design. Descriptive research is a type of design 'what exists' with respect to variables of the project study. Descriptive research includes surveys and fact finding enquiries, adding the major purpose of the descriptive research, as a description of

state of affairs as it exists (Kothari, 2003). Therefore the descriptive method was preferred as it was more precise and accurate because it involved description of events in a carefully planned way hence portrayed the characteristics of the entire population. Therefore the study was facilitated towards gathering information describing factors affecting sustainability of community based projects.

#### **Target Population**

Population is a set of units for which the study data will be used to make inferences (Kothari, 2003). A population is the total collection of elements about which a researcher wishes to make some inference. Target population is the unit for which the findings of the study will generalize. For this study, the targeted population included Kiirua village members who were the beneficiaries of the project, community representative staffs and Key informants who were the government representative, stakeholder, and CDTF staff. The study therefore targeted a population of 267 who were involved in the implementation of the project among them being 260 beneficiaries from Kiirua villages, 4 key informants who are 2 CDTF staff members, 1 government representative and 1 stakeholder directly involved in the project implementation. Also 3 other staffs representing the community as the accountant, human resource and supervisor. Therefore the entire population targeted was 267.

#### Sample Size and sampling procedure

Sample size is the group of unit selected to represent a large unit or group and must be large enough to represent an entire group (Kothari, 2004). According to (Plinkas, 2015) a sample size should be able to convey much information and easy to analyse during the process. The following formula was used to select the sample size.

$$n = \frac{N}{1 + NE^2}$$

Where: n = number of samples; N = total targeted population; E= margin error of 0.05

Therefore; 
$$n = \frac{266}{1 + (266 * 0.05^2)} = 160$$

The sampling procedure used for this study was the stratified random sampling. Various respondents categories were used which involved the key informants, government representative and members of the community. According to (Saunders, 2007) well-chosen samples range at a 10% for a descriptive study since it's enough for the population. Stratified proportionate random sampling technique was used to select the sample since according to (Babbie, 2010), stratified random sampling proportionate ensured representative sample was relatively derived from the population. The research employed the below formula in choosing the strata;

$$n_h = (\frac{Nh}{N})^* n$$

Where: nh= sample size for stratum h; Nh= stratum h population size

#### **Research Instruments**

The study used both primary and secondary sources of data. The first-hand information from the respondents, is referred to both as quantitative data and primary data. It was collected by use of questionnaires that were administered to the key respondents. The administration of questionnaires was more convenient since the respondents were given opportunities to choose the questions they had answers to and did not limit any respondent from answering. It was divided into sections A which entailed general information of the respondent while section B had questions regarding the dependent and independent variables A to E. Both open ended and closed ended questionnaires were used. Open ended allowed the respondents to freely respond to the questions while closed ended entailed fixed set of questions to be answered by the key informants. Questionnaires are a paper and a pencil data collection instruments filled by respondents for research purpose (Morris 2001). They were preferred because they seemed to be more effective and allowed as much information as well as cost effective. According to (Zohrabi, 2013), questionnaires were free from bias and researchers influence hence accuracy and valid data was collected. They were self-administered to a total of 80 respondents and picked for analysis. It involved answering a set of questions used to gather information and filled by the respondents. The questionnaire were open ended and closed ended to the respondents and allowed them to give their opinions on required data and not limiting them. Observations will guide towards reaching the direct responses from the target population. Also Secondary data was gathered from review of selected source of literatures and documents, including journals, manuals, related Acts, research reports and internet documents.

#### **Data Collection Procedure**

In order to collect data, the researcher first presented the proposed project study to a panel in Extra Mural Studies for defence in order to be permitted to collect data. After the defence panel accepted the topic suggested, the researcher sent a transmittal letter to the Kiirua Kathita Water project KKWP in order to get the permission to gather information regarding their project. Therefore, primary data was collected by administering the questionnaires that were filled by the respondents.

#### **Data Analysis Techniques**

Data analysis is the process of bringing order to already gathered data in order for it to bring meaning and understanding to the researcher in need of it (Babbie, 2010). Statistical Package for Social Scientists (SPSS) was used to analyse data in order to identify correlation between variables and means. It helped make conclusion on the topic both for the inferential and descriptive statistics. Quantitative data was grouped into certain categories as classified. For the descriptive data, means, standard deviation and frequency distribution were used. After the analysis, data was presented using the frequency tables and figures. To help understand the relationship between the independent and dependent variables correlation analysis was done using the Karl Pearson's product correlation.

#### **RESEARCH RESULTS**

The study had a sample size of 70 respondents drawn from the targeted population. The response rate acquired from the questionnaires administered and returned, was satisfactorily enough to draw conclusions from.

The study aimed at identifying how the level of funding influences sustainability of the community- based projects in Kiirua Kathita Water project in Meru County. From the findings the study reveals that the level of funding is an important aspect of any project as was shown by an overwhelming acceptance from the respondents who said yes when asked if funding influences sustainability of Kiirua Kathita water project. Further the study showed that the amount of funds and community contribution was wanting and one of the reasons of poor allocation of funds.

Findings on how community participation influences sustainability of the community-based project showed that community participation was bad with some of the respondents indicating that it was good in equal measure. This research further found out that community participation was beneficial especially in this type of project that is targeting water usage in Meru County.

This research also found out that training wasn't adequately carried out in this Kiirua Kathita water project. On the other hand it also revealed that training was beneficial for the sustainability of Kiirua Kathita water project since it gave them the knowhow on which aspects to learn so as the project can be sustained. In this connection many of the respondents cited management level and mode of education as some of the areas in which to be found in.

This variable was meant to establish to what extent does training influence sustainability of community-based projects. The study found out that the frequency of M&E was wanting in that a number of the respondents cited none that took place and if it did this was likely to be monthly. However, the study revealed that many of the respondents found M&E to be beneficial.

#### **QUALITATIVE ANALYSIS**

#### **Overall Sustainability of KKWP**

The respondents who were also the key informants agreed and shared that the project was undertaken in a semi-arid area of Kiirua within Meru Central District in Meru county Kenya. The area has been receiving insufficient rainfall hence the inadequacy of water being a major challenge therefore the reason for the implementation of water project. To ensure sustainability of the project many respondents agreed that the water kiosks made available and developed in Kiirua villages to ensure water was close to the beneficiaries instead of going for long distances.

The few developed kiosks were later on identified to not serving all intended beneficiaries hence the need for addition. Proposals on addition of the kiosks were sent to the funding organization which is the CDTF which developed more kiosks like in Kiirua market, 2 in Kiiau, Kiborione, Mitoone, Ntugi market, Ntumburi and Subuiga all to a total of 38 hence sufficiency and improved Local Water Systems. The respondents therefore shared that with addition of kiosks, water was now available to everybody since the infrastructure through piping, storage tanks and more water points were improved. This reduced long water distance search, helped improve living standards because people were able to do irrigation for subsistence crop production, safe and clean water for domestic and commercial use was also improved hence reduced chances of water related diseases. Sustainability is then achieved by ensuring that the beneficiary's needs are attended to hence meeting the projects objectives.

#### Improving sustainability of KKWP

Some of the ways to improve sustainability of KKWP, from the findings by the respondents indicated that managerial roles needed to be closely observed by electing leaders to express democracy of the beneficiaries, there was need to ensure the community benefiting from the project were involved in making project decisions and also ensuring that monitoring of every project stage was adequately done to establish solutions to any upcoming problems. Also better ways of ensuring sustainability, were to come up with regulations that all members and stakeholders needed to abide to, failure to which they were held accountable and would lead to punishments. This helped ensure maintenance of project activities an operations since it's an entity that employs personnel to work in it hence governed by bylaws.

# Recognition, Rating and benefits of Community participation on sustainability of KKWP

The respondents said that the rate of community participation was highly considered since the beneficiary community offered support for the activities undertaken and also were consulted on necessary areas changes were supposed to be undertaken. From the respondents, community participation was incorporated from the very first stage of the project implementation hence this motivated the community beneficiaries towards its sustainability. This participation helped in ownership of the project in the community hence helped them towards timely completion and successful performance of the project. With the community participation, the respondents said that with this involvement, it was easy to achieve the goals and objectives of the project from which their needs were expressed. This among many others being reduced distance in search of water, reduced risks of water borne diseases and improved living standards motivated by irrigation activities by the community people hence viewed it positively. From the community people, the findings indicted that they offered labour, materials required for the project and also decisions needed.

#### Level of Funding on KKWP Sustainability

The respondents' opinions on funding was founded on the activity objectives of the project. The findings showed that the resources provided successfully were managed for the implementation of the project. Funds were disbursed and allocated on the various sections of project operations. The level of funding was measured in terms of offered labour, purchase of materials like pipes, maintenance of kiosks and purchase of tanks. The respondents agreed to it that level of funding influenced sustainability of Kiirua Kathita Water Project since it ensured funds distributed were adequate to maintain all projects operations. Without funds not even a single stage of the project would be successfully operated.

#### **Training on KKWP Sustainability**

From the opinions of the respondents, it showed that training influenced how participation was undertaken since it showed how well people were enlightened with skills. Training was focused on ensuring expertise in the area of operation in order to embrace sustainability as the goal of the project. This also helped in ensuring people conserved the environment by reduction of soil erosion, management of the budget, and kiosks operation on how to handle customers. This training helped enlighten issues on transparency and accountability of funds to ensure they were well managed. Training from the respondents showed that the project has gone a long way to be successful and sustainable. The ratings from the respondents indicated that training did not incorporate all aspects of the project implementation but covered very crucial areas that were really needed to be seen by the beneficiaries. Training was not well looked into because allocation of funds was done on other important areas of the project but later on realized people operating within the project needed expertise to operate. Therefore went on being undertaken to its personnel.

#### Monitoring and evaluation on Sustainability of KKWP

The findings acquired from the respondents' showed that monitoring and evaluation was as well crucial as that of training. This is because the progress of the project was required at every stage of the project in order to identify areas that needed improvement, areas that had problems and wanted immediate to them. It showed that for monitoring and evaluation, community people were not very well incorporated hence the community people were not aware of the project progress.

#### CONCLUSIONS

Budget allocations should be given an in-depth scrutiny in order to avoid many of the pitfalls that come with allocations of funds. This will help in avoiding of poor allocations of funds to things that don't matter in the project hence project failing. The budget will enable the project managers and stakeholders to know what level of funding is required.

Community participation in any project should be uphold in all stages of the project, hence helped bringing in the sense of ownership to the people and this brought accountability and transparency, since without community participation the people tend to lose interest for the project. A conclusion is made also on improvised service delivery by training, since people have gained expertise of their skills to be delivered to its people. According to (Neil, 2003), donors should let the beneficiary communities take the lead in development projects and they themselves should take a supportive role. According to (Horton et al 2003) states that success is influenced by partnership between the donors and the beneficiaries who are the community. According to (UNDP, 2011), leadership and capacity building are related in that leadership protects the community, organization and the individual. And this is the view of this study which is insisting that training of everyone involved in any project should be a must. It also concludes that M&E should start from the beginning of the project until the project has undergone its life time. This ensures that every aspects are covered as they evolve till the end. Many tools can be used depending on the capacity and skills of those involved. The issues seen in Kiirua Kathita Water project as pertains M&E should be discouraged at all cost especially the frequency of performing M&E.

The study also concludes that the problem women and children undergo in long distance search for water is solved hence improving their productivity through clean and hygienic conditions for their daily chores undertaken. Also concludes that employment is created to the people of Kiirua by rendering services to its people which therefore improves their income for improved living standards. There is also a reduction in water connected diseases like cholera and typhoid among others.

#### RECOMMENDATIONS

The findings and discussions that followed this research have revealed many issues and recommendations are in order; the researcher therefore recommends as follows:

Funds are an important aspect of the project, better allocation of the same should take precedence in all areas. This will help in knowing what does the project requires in terms of funds. Forcing community to contribute to the projects in pretext of making them own the project should be discouraged. Every step of the project that is based in community like the Kiirua Kathita water project that is intended for the same people should be made in such way that participation of the community is done from the inception till the end. This therefore fosters togetherness and clear communication between members. With community participation, comes in with motivation and interest for the sustainability of projects.

Training is always an aspect of making sure that what or which one doesn't know is further taught in order to understand the issue or the emerging issues in projects or any field, the researcher of this study therefore recommends that any member in any project need to be trained in also aspect of it be it management or skills that are relevant to the project like water project that needs so much time to understand and risks involved. Monitoring and Evaluation should be incorporated to help achieve projects objectives as well assess the performance of the projects at all levels.

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