INFLUENCE OF COMMUNITY PARTICIPATION ON SUSTAINABILITY OF WATER PROJECTS IN LAIKIPIA COUNTY: A CASE OF SOLIO WATER PROJECT

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2023

DECLARATION

I declare that this is my own work and has never been presented for review in another university or higher education institution.

Signature …… Date …..30th August, 2023……

Jane Wangari Mukundi

L50/11522/2018

This research project has been presented for review with my consent as the supervisor.

Signature……. … Date: ….30th August, 2023……

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DEDICATION

I dedicate this research project to my mum Nancy Mukundi for her genuine love and continued support. Thank you.

ACKNOWLEDGEMENT

I thank God for the mettle, insight and capacity to finalize this investigation. I appreciate my supervisor Dr. Lydiah N. Wambugu for her dedication, availability and distinguished counsel. I would like to thank my lecturers at the Department of Management Science and Project Planning for their counsel and support throughout my studies. Additionally, I wish to thank my co-workers who were always ready for their time, advice and support.

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ABBREVIATIONS AND ACRONYMS

CBP	Community Based Projects
KESHP	Kenya Environmental Sanitation and Hygiene Policy
NACOSTI	National Commission for Science, Technology and Innovation
NAWASCO	Nanyuki Water & Sewerage Company
SD	Standard Deviation
UN	United Nations
UNEP	United Nations Environmental Programme
UNICEF	United Nations International Children Education Fund
WHO	World Health Organization

ABSTRACT

Community participation in water programs has a number of advantages along with more sustainability, social acceptability and equalized benefits for all members. Since water is not readily available, it should be carefully protected and maintained for the good of the entire society. The key question is to find out if communities never show attention in discussions on water use or are not allowed to participate. Participation is a method where stakeholders' impact or share controls over programs and resources that positively or negatively impact them. Study's purpose is to find out how community participation influences sustainable projects involving water in Laikipia; an example of Solio Project. The research objectives are guided by this study are; Determining how community participation in resource mobilization influence sustainability of the Solio Water Project in Laikipia, to examine how community participation in project planning influences sustainability of the Solio Water Project in Laikipia, to assess how community participation in project implementation influence sustainability of the Solio Water Project in Laikipia and to establish how community participation in project monitoring and evaluation sustainability of the Solio Water Project in Laikipia. The study is anchored by sustainability theory. The study's design of research is descriptive research design. The participants in the study are residents of Laikipia East Constituency. Located in the Laikipia East region, the Solio Water Project serves seven villages in Tigithi ward. Laikipia East Constituency has a population of 158,243 people, according to a 2019 estimate from Kenya's National Bureau of statistics. There is one community project water officer per village in the seven villages. Simple random sampling has been used to select 353 participants for this.In the investigation, a questionnaire has been employed as the primary tool to gather information. Close ended questions are applied in collecting quantitative data after which it is organized and categorized. Interview guide is applied to interview the community project water officers. The data additionally is coded through assigning figures, symbols, signs and numerals. In conducting data analysis, the (SPSS) software is applied. Descriptive statistics is obtained from the data compiled and displayed in percentiles. Qualitative data has been examined by applying content analysis. Tables and figures have illustrated the conclusions and recommendations.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Globally, program sustainability is crucial. Accountability is needed to make sure that its output, benefits and outcomes are sustainable through their life cycle together with their development, decommissioning and disposal (Sartori, Catalano, Genco, Pancotti, Sirtori, Vignetti & Bo, 2014). Institutions should also aim to work on profit as well as expansion but also in doing so in a manner that does not jeopardize coming generations' possibilities. Sustainability is important in every aspect of project-based work. Sustainability should be integrated throughout the management of the project lifetime, not just for the outcome, as projects are receiving greater attention across various sectors (Padickakudy, 2019). Sustainability includes trying to balance various issues, like change of climate; society; community; economy; including affordability as well as administration like health and safety (Mensah, 2019).

Community participation enables processes of empowerment that gives those influenced by the project to take responsibility in design, implement, and sustain, Regional Partnership for Resources Development (2019). It is a goal in and of itself, and can be described as a process of empowerment in which they gain the necessary skills and information to assume their growth. Human beings are at the heart of participatory approaches, and without their cooperation and involvement, nothing happens or succeeds. Most development projects have stagnated or failed due to a lack of some key participatory processes of engaging people, and as a result of these breaches, management gaps have emerged, threatening the projects' life and completion (Mulwa, 2018). The availability of project finances is not assured of the project's success or, by extension, its long-term viability, as evidenced by multiple situations. It is critical that people participate in management, monitoring, and assessment. Community structures that are traditional must be upheld since they legitimate the project, whether it is government-financed or donor-funded. Participation in managing project enables project embracement while also holding the governance that is local responsible for the monies spent and the quality of the project (Kasule, 2016).

Community participation has been suggested to have numerous benefits. The project's long-term viability, as well as community members' ownership of the process and end product, are among the most important. When individuals engage in and influence the process, the financier must release some influence to them. Individual's capability to run the project, monitor, analyze, make decisions and comprehend their own tough times, grows as their empowerment grows, as does their desire to participate in all aspects of development (Kumar, 2017).

Participation ensures that resources are used efficiently. People collaborate in order to achieve their goals. Secondly, the public's involvement surge productiveness; tasks will be done within their timeline, effective monitoring and evaluation, as well as create progress reports. Participation also improves effectiveness by allowing people to have a say in the project's goals and strategies. This helps people to become less reliant on others and be more self-reliant. People's participation may be a powerful tool for ensuring that benefits reach the intended recipients. Additionally, affordable cost can make sure that the required resources are there for broader consideration of the weakest segments of the society (Rietbergen-McCracken & Narayan-Parker, 2018).

More often than not, government institutions or governing bodies are loath to designate authority locally, particularly when it comes to development challenges. Local people's interest in development may be stifled as a result of this hesitation, and viability may suffer as a result. Moreover, more public participation, particularly interactive participation, has been shown to raise expectations as a result of local participation. This, however, may not always be the case (Resnick, 2014).

1.1.1 Community Participation

This is an activity where the people who benefit affect the way of projects' execution other than receiving benefits of the project. In the place of development, people's involvement is called an active process through which people who benefit have a say in the direction as well as projects' implementation. The active involvement by society in most of the designs and construction of the projects is the most important in the development of a community (Mansuri & Rao, 2014).

It can be divided into hierarchical programs and step-wise initiatives. These methods are diametrically opposed and differ based on whether bodies responsible for putting in place have overall authority over the program (Mutua, 2014). Community participation can also take the form of: passive participation, where members are notified of the project plans; active participation, in which people respond to inquiries given by the analyst via surveys; and participation in information sharing. In consultation-based participation, opinions of the community are considered, and external agents listen to their opinions on problems and solutions that are usually determined externally. This may or may not be seen as empowering to question existing inequitable income and power distributions (Mwiru, 2015).

Dividing project expenditure, escalated activity's effectualness, improving inheritor competence, and acceptance were identified as five community participation objectives. Allowing the public to actively be involved in projects planning and execution can aid in enhancing the design of the project by integrating expertise that are local, enhance the acceptance of the project, give many advantages, induce communal assemblage of resources and guarantee continuity of the projects (Ruwa, 2016). Expenses may be incurred due to community involvement: project delays; increased workers; and force to enable the level or breadth of services. Participatory methods are riskier than authoritative administration because of project acceptation risk owing to lack of experience with participatory ways (Choosri, 2015). Community involvement improves accountability, transparency, and the long-term viability of development programs.

The community must engage in project implementation, mobilizing resources, M&E, and planning functions within a community-based project management approach (Sara and Katz, 2017). The quantity of money, goods, and labor that people donate in exchange for services is referred to as community resource mobilization, and it is tied to demand responsive projects. In a expect-acceptant strategy, local support acts as an marker of program demand, according to an investigation of the relationship between mobilization and sustainability (Khan, 2015). The extent of community's capital assemblage shows its intentional to absorb all the predicted expenses.

Planning is a process of communication in which people with varying ideas debate how goals of state should look, how they will achieve, and how to put in place and reach a consensus on these ideas (Chikati, 2019). Chikati (2019) goes on to say that via dialogue, people can gain the dedication they need and stick to their decisions. As a result, planning entails process control. The society, that is the primary projects' beneficiary, ought to be included in planning of the project like allocation, budgeting, procurement and resources identification through the employment of project implementation committee (Mulwa, 2018).

1.1.2 Sustainability of Projects

Sustainability means "to keep or survive". The Triple-Bottom Line (TBL) is a crucial component of sustainability. It originated from the Brundtland studies, which define the three constituents of sustainability: economics, environment, and social well-being (Portney 2015). This concept was established and popularized by John Elkington, who encouraged firms to monitor and assess their performance using the 3 Ps instead of profit (Henriques and Richardson 2014).

The connection between project and sustainability is defined. It examines the guidelines for the efficient acquirable resources usage and outcome assessment environmentally, socially and economically. Project management allocates and utilizes resources focusing on the desired combination of time, cost as well as quality results to increase stakeholders' benefits (Costantino, Gravio & Nonino, 2015). This procedure has become a reductionist since it does not account for various issues of environment and social life, which hinder long-term sustainability (Armenia, Dangelico, Nonino & Pompei, 2019).

1.1.3 Water Projects in Laikipia County

Laikipia County government's water department has made the decision to make Laikipia a secure county with a clean, safe, and sustainable environment. The department's purpose, according to the governor's manifesto, is to offer appropriate safe water and sanitation services in a natural environment that is sustainable. Muramati borehole, one of the key projects, was drilled in May 2018 and is still ongoing. In line with the governor's

agenda, the department also aimed to build five large dams in other wards, starting with Pesi and Rumuruti dams (County Government of Laikipia, 2018).

The County Government of Laikipia and the Water Sector Trust Fund collaborated on the Solio Water Project. On November 5th, 2018, the contract for the Solio Water Project was formally signed. Water is delivered from the Aberdare Forest by 37 kilometers of piping to Solio, where it is distributed via another 50 kilometers of pipes to the communities and residences. Two masonry tanks with a combined holding capacity of 225m3 have also been built. Aside from an office building, there are various communal water stations. The project will serve 19,850 people living in the seven communities of Tigithi Ward in Laikipia East Sub-county, as well as seven primary schools, two secondary schools, two health centers, and thousands of domestic cattle. A total of 1,600 households in Furaha, Rehema, Bahati, Tetu, Mathingira, Makandamia and Baraka villages have metered connection (County of Laikipia, 2022).

1.2 Statement of the Problem

Both Kenya Environmental Sanitation and Hygiene Policy (KESHP) and Kenya Vision 2030 are working together to make sure that everyone in Kenya has better sanitation and clean water by the year 2030 (KESHP), 2016-2030; Mwangi, Otiego and Ndakorerwa (2015). According to a UNICEF and WHO Joint Monitoring Plan report, just 33.3% of the population in grassroots areas has clean water easily available. For 263 million people, it took almost an hour to fetch water from sources that were updated in 2018, which was regarded as insufficient supply of drinking water for the general population (UNICEF, 2018). Due to the fact that most water projects necessitate substantial infrastructural investment and management systems, the issues go far beyond merely gaining access to water and include the ability to establish innovations related to water linking with numerous customers who share a common water source (Cosgrove & Loucks, 2015).

Water point management in Kenya is critical for the long-term sustainability of water resources (Kakumba 2017). Despite the local government's efforts in collaboration with foreign and local groups to address the situation at the grassroots, water coverage is still rudimentary in the majority parts of the country (UN-Habitat, 2015). According to

estimates, just 60% of the population has drinking water despite reliable water sources and enough rainfall across the region. The many people in villages and are the most affected (Hutton & Chase, 2018).

In Laikipia, researchers have looked at the NGOs initiatives sustainability in a range of disciplines, including health and education. Gathiru (2014) assessed the determinants affecting sustainability of projects funded by the donors, applying the example of sanitation and water projects in Laikipia East Constituency and established that permitting the locals to participate, leads to sustainable water projects. Mustafa (2016) also investigated determinants that influence water supply projects sustainability by the community in Laikipia East Constituency. The research found out that permitting the locals to participate in ensures that those affected, are given an opportunity to work on the results. Another study was conducted by Kiteme, Jörin, Ifejika Speranza and Wiesmann (2018) on community-based water projects, their success, and ways of improving them. According to the report, one of the crucial ingredients for project success is participation. However little attention has been given to sustainability aspects like community involvement and financial resources when it comes to water project planning. This research thus has focused on addressing this problem by answering the question: How does community participation influence sustainability of water projects in Laikipia County?

1.3 Purpose of the Study

The research explores how community participation influences water projects' sustainability in Laikipia; an example of Solio Project.

1.4 Research Objectives

The objectives of the study were:

i. To determine how community participation in resource mobilization influence sustainability of Solio Water Project in Laikipia County
ii. To examine how community participation in project planning influences sustainability of Solio Water Project in Laikipia County

iii. To assess how community participation in project implementation influence sustainability of Solio Water Project in Laikipia County
iv. To establish how community participation in project monitoring and evaluation influence sustainability of Solio Water Project in Laikipia County

1.5 Research Questions

The research questions of the study were:

i. How does community participation in resource mobilization influence sustainability of Solio water project in Laikipia County?
ii. To what extent does community participation in project planning influence sustainability of Solio water project in Laikipia County?
iii. How does community participation in project implementation influence sustainability of Solio water project in Laikipia County?
iv. How does community participation in project monitoring and evaluation influence sustainability of Solio water project in Laikipia County?

1.6 Significance of the Study

This investigation has investigated how involving a community on a long-term water project in Laikipia County influence its sustainability. The results are intended to enhance understanding and improve current academic knowledge on the variables which affect the sustainable water projects particularly in Laikipia over the years. Investing in water infrastructure leads to remarkable outcome on sustainability.

County governments and non-governmental organizations may find this research to be very useful in understanding community participation's influence on water programs viability and, as a consequence, improve water service availability for everyone. The outcomes of the findings might be of help in Laikipia to recognize the locals inclusion in a program's long-term survival.

1.7 Delimitation of the Study

The exploration was restricted to evaluating the influence of community participation on water projects sustainability within Laikipia, specifically, the Solio Water Project. The

research concentrated on the Laikipia County area since the county has made tremendous effort in ensuring access to sanitation and clean water to the residents. The Solio Water Project has been completed and it was easy to understand how sustainable the project is.

1.8 Limitations of the Study

This inquiry collected primary data by employing questionnaires. The researcher anticipated that during data collection, respondents of the inquiry may be scared that details collected may later become intimidating, making them to shy off from giving adequate details. However, the circumvention of the limitation was reassuring the residents that the details given were classified and were only to be applied academically.

The researcher also expected that some respondents had challenges in reading and understanding the questionnaire. The researcher therefore instructed the research assistants to offer help to such participants to make data collection easy and guarantee the provided data is accurate and reliable.

1.9 Assumptions of the Study

The participants were effortlessly reachable, willingly participated, provided relevant information, and answered the instrument's questions honestly, according to the presumption. The research has also assumed that the findings were applicable to the whole population under investigation.

1.10 Definition of Significant Terms

Community participation in Resource Mobilization: These are activities that are important in acquiring new funds for implementing water supply projects. It also involves the optimization of the currently available resources.

Community participation in Project Implementation: Refers to communal involvement in execution as well as accomplishment of a project.

Community participation in Project M&E: This is a process that involves the community in evaluating a project’s progress, keeping tabs on the project and identifying potential problems.

Community participation in Project Planning: Refers to the process of communal involvement in deciding how a project will be complete, setting measurable objectives, identifying results and forecasting.

Community Participation: Refers to communal involvement in identifying, planning, implementing, and monitoring and evaluating activities, in making and putting those decisions into action.

Project Sustainability: This is how a project has the potential to constantly meet community needs, after financier withdrawal or completion.

Water Projects: Any water amenity including planning, developing, financing or constructing thereof.

1.11 Organization of the Study

The investigation shows three segments: foreword, body, and conclusions, baseline studies, declaration of the search query, study purpose, goals, questions, the importance, limits, including important phrases explanations make up section one of the paper. The following section (literature review) contains the analysis of literature, knowledge deficit, conceptual basis, and theoretical structures. The third section covers study method of research, sample distribution and sampling maneuvers, data collection apparatus, gathering findings, piloting research tools, information gathering techniques, ethical issues, and operational description of determinants (study methodology). Section 4 displays the research's outcomes as well as and conclusions. The final section includes summarization, discoveries, determinations as well as propositions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review and knowledge gaps of previous investigations are focused on within the chapter. This study also reviews sustainability theory. The summary of literature and research needs is given for conceptual framework.

2.2 Sustainability of Water Projects

A process that shows how anything continues to function after a period of time is referred as sustainability. Despite its significance being recognized, the idea of sustainability remains vague (DeMiglio & Williams, 2013). It is the maintenance of an investment after completion. Together with foreign funders, efforts have been put in place to make sure that persons all over the world can get clean and drinking water supplies. This leads to most of them becoming a complete and total failure. Nearly half of village population in Africa access drinking water through a hand pump that is 66% efficient (DeMiglio & Williams, 2013).

Water and sanitation facilities that stay functional throughout the time while accepting change are good examples of sustainability. To be really sustainable, according to him, one must think about the components of technology that are non-technical, together with the social ramifications and economic and environmental limits that go along with it, as well as the consequences of those choices (Kuhlman & Farringtom, 2019). Water demand, aids by local and affordable operations and maintenance, compensation etc, should be weighed when sustaining water projects (Montgomery, Elimelech, and Bartram, 2020). However, various hurdles have been identified, such as lack of chance, no information, outdated technology, lack of rural development and lack of motivation (Montgomery, 2020).

Water supply sustainability indicators to consider may be broken down into individuals, achievement, and locale. To be sustainable, water supply management has to be linked to the environment, as well as the cultural setting. To further clarify this issue, markers of the environment uncovered include water ease of access, quality of accessed water,

changes in appropriator, wastage, and pollution. As institutional traits and capability to lay ground for fixing issues and local potential to improve management, sustainability is a constant attribute. Lastly, sustainability can be achieved through management involvement, community audience meetings, and individual accountability. These concepts and behaviors were found to motivate individuals to become involved in water system management more broadly by those who participated in the research (Iribarnegaray & Seghezzo, 2017).

2.3 Community Participation in Resource Mobilization and Sustainability of Water Projects

Resources should implement whatever project. They include human, financial resources, and materials used during the execution of the project. Due to few resources available and several needs at the constituency level, resource mobilization has become an increasingly complex task. Resource mobilization is a fundamental aspect of project delivery and impact (Okeyo & Lewa, 2020). It demonstrates that after the project is identified, resources optimization is essential for the fruitful design, execution, as well as impact. Resource mobilization is commonly referred to as 'fundraising.' It is essential to note that resource mobilization not only refers to funds but also services, goods, and human resources (Grace et al., 2020).

Finances are resources that are used to implement projects. They can be sourced from CDF, the national government, and non-governmental institutions (Musyoka, 2014). The human resources can be sourced from local partners, ministries, volunteers, professional officers, or from international agencies (Okeyo & Lewa, 2020). Goods and services include specialist equipment, vehicles, training, and other welfare services required during the implementation phase. Resource mobilization is core in project delivery. Notably, resource mobilization has three main phases: plan, act, and reflect. After the design stage, the project committee is required to plan how they will acquire funds to implement the project (Grace et al., 2020). The committee should plan how they will approach resource partners and how much money they will request. Also, they should make a quality communication plan that will support the resource mobilization strategy. The second stage is the action stage. It involves identifying resource partners, engaging

the partners, negotiating for funds, managing funds, and communicating the outcome (Musyoka, 2014). The final stage of the resource mobilization strategy is reflecting. It involves whether the process achieved its goal. It focuses on reporting the successes as well as the viability of the project. In the topic study, most of the funds are acquired from the CDF.

In establishing the relationship that the mobilization may have on the implementation, (Ochieng' & Sakwa, 2018) gave a good example based on water projects in Kisumu area. According to the two scholars, the local people may not be able to give much of the financial contributions to such projects but offering their labour and in some instances land where the projects can be implemented improved the efficiency of service delivery (Ochieng' & Sakwa, 2018). The other key resource that can be mobilized is information, which can anticipate problems and constraints that may affect the effective delivery of water services (Ochieng' & Sakwa, 2018). It is evident from the Kisumu water projects, that designing and planning will be successful in most instances with communal involvement on mobilization of resources.

The concept of participatory development was used by Tsuma et al. (2019) in affirming the conclusions of the Kisumu water project. The three scholars center implementation of projects on sustainability in which local communities hold a competitive advantage during and after implementation (Tsuma et al., 2019). Where communities have participated in mobilizing the necessary resources, the chances of the ease with implementation are possible, as has been the case with water projects implemented by religious institutions in Kenya (Tsuma et al., 2019). There may be risks of political and individual interests with mobilization of resources, especially with government projects, but the risks are adverse when participatory development is neglected (Tsuma et al., 2019).

2.4 Community Participation in Planning and Sustainability of Water Projects

Hinchcliffe et al. (2016) investigated projects which used collaborative method to protect both water and soil. The initiatives were successful because the local community was well informed and had acquired the necessary skill. Easy accesses of clean water, soil erosion protection and availability of water for irrigation were some of the benefits

brought by community involvement. Continuous use of pesticides and herbicides can lead to water pollution. Direct people engagement is crucial.

Beierle and Konisky (2017) examined that communal structures contained project beneficiaries and various mechanisms of ensuring water quality and environmental protection. It was discovered that in most cases, shareholders' ideas and opinions were very important during implementation; hence they highly impacted the successful completion of the projects. Salter and Torbett (2020 suggested that time differences majorly examined building projects efficiency. Time indicate that the construction project was not finished according to the expected time. According to a 2016 Latham survey, clients demand the assurance that projects will be transferred on schedule. Through community involvement, project implementation time may be greatly reduced. Community ownership of projects leads to successful projects implementation.

While studying public perceptions of River Basin Management Plans (RBMP) in the Herat watershed, parts of south France, Garin et al. (2018) compared the experiences of other participants to those of experts. They found out that some inquiries go unnoticed by professionals, whose ideas are misinterpreted by the people. The project's shareholders refuse all the implied plans, making the project implementation challenging. The main source of doubt is lack of information (Ostrom, 2016). This knowledge can be obtained and also gathered from local observations and opinions. Local information helps in identifying mistakes and amendments (Kickert et al., 2016).

2.5 Community Participation in Project Implementation and Sustainability of Water Projects

Involving the locals and using all the available resources in project activities are impacted by implementation when the emphasis moves from implementation (project management methodology, 2015). Nonetheless, according to Benson (2015), stakeholder engagement strategies are employed to keep the project on track and achieve outcomes. In the same way, a research by Mirza and Ehsan (2016) on the construction of a project implementation difficulty index revealed that project execution resolved several ambiguities. Mirza and Ehsan (2016) suggested that plan of execution, apportionment of resources and shareholder involvement influences implementation in that, execution is

only achievable if it is scheduled and there is availability of resources. Further, motivation has an influence on implementation of project in Nigeria (Lawal and Okhankhuele, 2014). Communities that participate have a higher chance of ensuring project success because they have more expertise and knowledge and understand their needs better than outsiders. It multiplies fresh project ideas, which can then be shared easily with other groups, resulting in growth (Abbott, 2013).

Stakeholder engagement at project implementation is moderated as the proportion of total investigation by Johansson, et al., (2016) indicated that people contribute and use their resources during project implementation. Bal, Bryde, Fearon and Ochieng (2013) identified important steps for involving the project shareholders which include authentication, categorization, governing, checking their input and placing goals into outcomes leads to resources availability. Ngondo (2014) asserted that the quality of feedback should be examined in order to come up with viable plans. Stakeholder participation should be at the center stage from execution up to appraisement (Leeuw, Cameron & Greenwood, 2012). With this, there is a guarantee that community's ideas and stakeholder participation are included leading to project sustainability after project completion.

Likewise, Takim (2016) suggests that a procedure that is conventional must have project implementation plan. Further, Takim (2016) and Wu and Chen (2014) suggested project implementation plan eliminates disputes leading to sustainable water projects Also, an investigation on how resources not available on time affect when projects should be completed, hence affecting viability Okeyo, Rambo and Odundo (2015. Further, an investigation was carried out on the effects of project implementation tactics on total war success in Turbo, Kenya, aid projects for the youth by indicate that people should be educated on project implementation plan. These studies show that availability of plan on project implementation, delay or lack of resources, stakeholders engagements influence sustainability of projects.

2.6 Community Participation in Monitoring and Evaluation and Sustainability of Water Projects

Tracking of programs allows stakeholders to feel more empowered to address the challenges facing the local community (Kamau, 2017). Moreover, participatory monitoring strengthens the relationships between the stakeholders. It ensures there is no conflict of interest while ensuring the sustainability of water projects meets its goals. The project team can also improve training in the surrounding communities so that they have the necessary technical skills to take part in effective monitoring. Project management teams should ensure that all stakeholders and other groups monitoring water projects viability have the necessary knowledge on project implementation process (Tengan & Aigbavboa, 2017). When all stakeholders have the necessary monitoring knowledge, it leads to more credible and accurate monitoring results that will allow informed dialogue.

Guijt and Gaventa (2018) suggest that M&E is taking into account people's ideas and opinions into account. Monitoring & Evaluation includes the locals, shareholders, policy makers who monitor, quantify, and work on results. More community participation in identifying and examining change shows exactly what is on the ground. They are able to celebrate achievements and learn from their flops. There is also a sense of ownership to everyone allowed to take part as they become expertise.

There should be experts involved in all programs from the government and NGOs for monitoring and evaluation to be effective (Narayan 2018). It's important to have ongoing discussions from NGOs as well as local communities. The most effective learning course will never have any institutional memory to draw on in order to infer observations and thoughts. Having strong government backing at the top is ideal, but it is not required if the probe knowledge is accepted. For this to be successful, accountability of individuals in all levels should be emphasized (Korten and Siy, 2016). An avenue that allows people to participate should be adopted and put in place so that it is within the intentions of the beneficiaries that are targeted. Contrary, dynamics of the groups and dynamics will overcome the attempt. For involvement, it is more than just a specialized exercise

inspired only by self-interests. To make involvement effective and permanent, it's critical to develop a one people and community ownership (Hirschman, 2016).

Most development programs aim to influence the behavior of government officials and residents in the area. According to (Pelletier, 2018), Tanzania offers excellent examples of initiatives which show that collaborative monitoring and evaluation responsibility rests with the people do have a very high advantage. The availability of information sparked widespread engagement as well as a shift in bureaucratic priorities. Following an execution of a comprehensive assessment fashion, government employees were able to begin working more efficiently. Local people's collective and individual behavior changed dramatically once they realized how successfully they met fundamental needs precisely and comparatively through time and between jurisdictions. While there were obstacles to overcome, once the community and those in power did a joint assessment gave an assurance and hence these obstacles proved to be more pliable than imagined.

2.7 Theoretical Framework

A theory embraces many views and modern techniques used in a given issue. Sustainability and social action theories will anchor this study.

2.7.1 Sustainability Theory

The United Nations promoted the concept of sustainability. Sustainable results are those that can be sustained over time without deterioration, according to the notion. Because resources are limited, the theory is based on economics, which takes into account that future generations may also need these resources (Baariu, 2015). Sustainability has three pillars, according to the theory: social, ecological, and economic. Natural and financial resources are safeguarded by economic principles, while environmental principles preserve ecological integrity and biological variety, and social principles guarantee dignity of people (Jenkins, 2010). To ensure the long-term viability of this initiative, it must include factors such as needs of human that are basic, involvement of the community, social responsibility, and local self-reliance, as well as problems like fair resource distribution and easy access to low-cost technology (Baariu, 2015).

Following the findings of this study, projects focused at boosting access to clean drinking water in communities might last much longer than just the time it takes to execute them. The project should serve its purposes once complete. Political actors' major purpose is to guarantee that social systems attain dignity of human, and sociocultural variables do not impede the success of the program. They also contend that economic aspects such as financial resources must be carefully handled to increase sustainability.

The theory helps in understanding poor or no sustainability due to lack or no inclusion of ideas, views, and local community in implementing projects. In this case, project sustainability is only achievable through community participation through provision of critical services like construction of water drains, sanitation blocks laying pipes and building of water kiosks.

2.7.2 Social Action Theory

Max Weber's theory states that people create society, institutions and structures. It's the people that determine the society, and is created "from the bottom up".

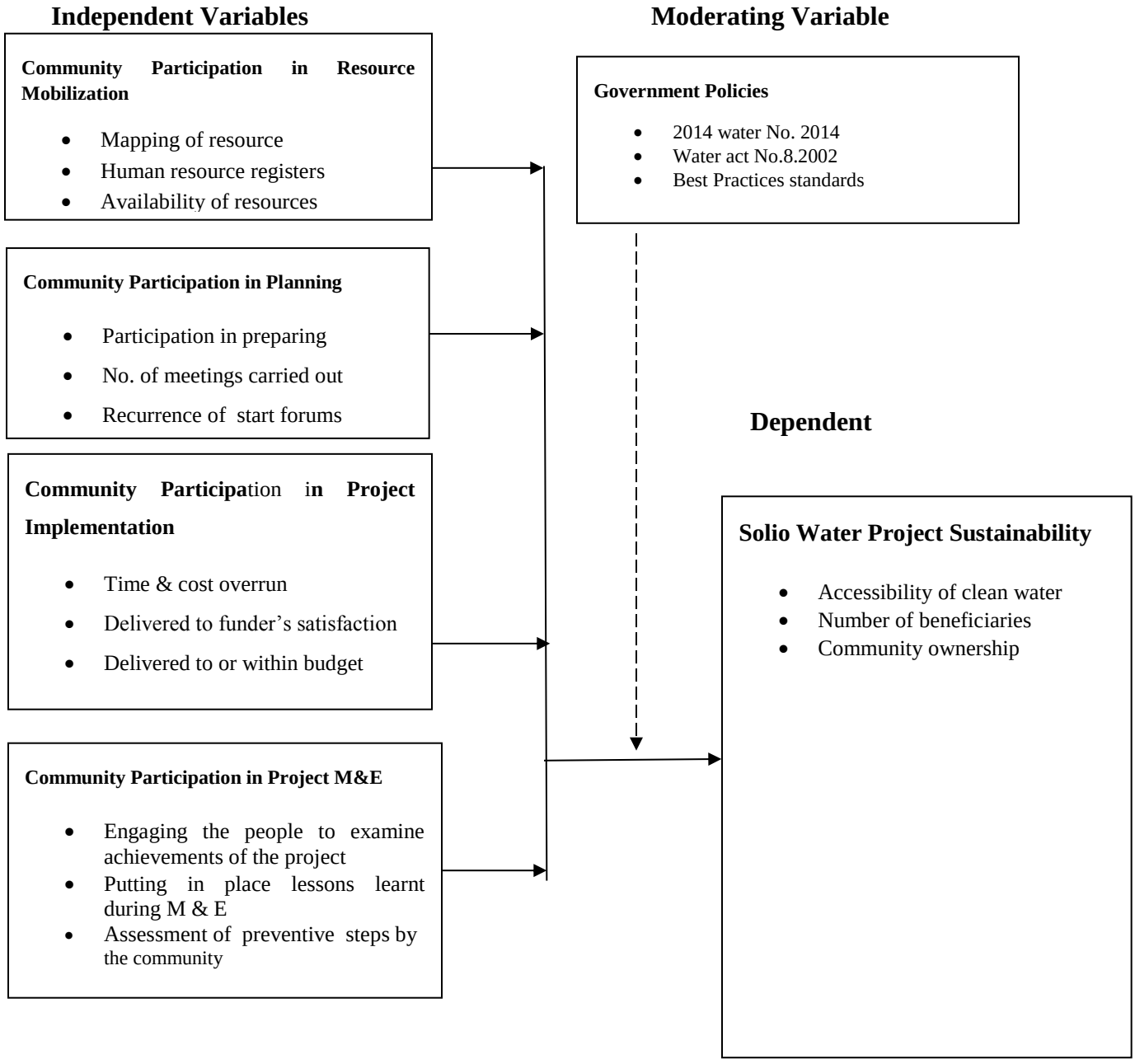
The theory emphasizes on individuals' actions and reactions. It presumes that individual behaviours differ relying on the predominant situations and the impact they will have on other people.

It further suggests that people are the only determinants of their own needs, dreams and interests (Adler, 1924). Human beings' unwanted behaviours might relate with already current not done wants including future aspirations (Nelson 1910).

It is therefore important to the research in that community needs and desires need to be connected with the initiative's objectives in order for the beneficiaries to ensure lasting viability of a project. People involvement in all the project process from inception to completion leads to success.

2.8 Conceptual Framework on Community Participation and sustainable water projects

Variables interaction in a study is usually illustrated using a conceptual framework. It depicts all underlying constructs of the parameters under investigation and their relationships, Myers (2011). This diagram demonstrates the relationship between many aspects in a research project as a conceptual framework (Borg, Gall & Gall, 2015). The illustrated figure explains the study's conceptual structure.



2.10 Knowledge Gap

Research into the literature finds a dearth of knowledge on the following topics: the viability of the Solio Water Project in Kenya's Laikipia County after community participation. In order to bridge such knowledge gaps, this study intends to look at how community involvement Solio water project's sustainability.

Table 2.1: KNOWLEDGE GAP

Variable	Year & Author	Study Name	Conclusions	Knowledge Deficit
Community participation in resource mobilization	Okeyo & Lewa (2020)	Strategic stakeholder strategic management and resource mobilization in the University of Nairobi.	Stakeholders are essential in resource mobilization. They should also have a strategic plan to acquire funds	The study focused on top-level management and no other essential community participation
	Musyoka (2014)	Impact of assemblage of capital on the functioning of community-based organisation	Capital assemblage was vital to the success of any project	The sample population was insufficient to represent the views of all community participation
	Grace et al. (2020)	How mobilizing resource is influenced by empowering stakeholders	When stakeholders are involved in the design stage, they are more willing to	The data collection focused on the middle-level management, and there was limited representation from

			contribute funds	the top-level management and other community members
Community Participation in Project Planning	Akali & Sakaja, (2018)	Influence of planning strategies for the projects' performance within Kenya by the community	Results revealed that community involvement in planning has an effect on overall projects' achievement	This gap will be filled by researching how planning of Solio Water Project influenced its sustainability
	Walubengo (2019**)**	Community taking part in projects planning and their performance in Bungoma	Established the relationship amongst communal project planning and that of road projects implementation is influenced by design	The focus was on involving the community in project planning for road projects but failed to address sustainability of the projects, a void aimed to be filled in this study.
	Muchunu (2015)	Influence of involving stakeholders in planning with respect to execution of government-funded initiatives, A	The majority had no clue of the Isiolo budget hence lack of stakeholders' in project planning involvement	The study focused on project planning for projects sustainability but failed to address sustainability of water projects a void aimed to be filled in this study

		case of Isiolo County		
Community participation in project implementation	Mugo, (2018)	Impact of involvement of community in implementation on building execution of projects in Nairobi City County, Kenya	Community involvement in project implementation enabled information to be relayed to the right audience and thus increases trust and team synergy	The gap will be investigated using community participation in project implementation of Solio Water Project
	Shakeri and Khalizadeh, (2020)	A case of Iran to identify factors influencing project implementation using a hybrid DEMATEL-ISM approach	Involvement of community in implementation increases sustainability	Application of this in Kenyan context
	Dziekonski, (2017)	Factors influencing community taking part in implementation of the project.	Results indicate that project managers' most essential responsibilities are project implementation. However, few	The gap will be investigated using, communal involvement in execution of project

			researches have been done on measuring execution of projects	
Communal Involvement In Project Monitoring And Evaluation	Tengan & Aigbavboa (2017)	Degree of stakeholders involvement and participation during assessment and tracking	Participatory evaluation and monitoring by stakeholders promote organization accountability and learning	The study mainly focused on top-level management and little on other stakeholders
	Kamau (2017)	M & E outcomes on involvement of stakeholder and accountability level is exercised are discussed	Accountability of stakeholders decides project's effectiveness	It has not explained how the stakeholders were allowed to take part in M & E process.
	Ruwa (2016)	A research of the impact of shareholders engagement on the effectiveness of financers initiatives	Effectiveness of the project and stakeholder participation are correlated.	The project that was not an initiative of the local community and there was no inclusivity.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Data gathering strategy is illustrated within the chapter. Inquiry design employed, target group, representative number, determination techniques, data gathering tools are also described. It describes how instruments were piloted to enhance data quality, validity and reliability. Further, methodology on data compilation, analyzation and presentation is discussed, including ethical considerations.

3.2 Research Design

Quantitative as well as qualitative procedures were applied in the study. Solio project sustainability was studied using descriptive study design. Descriptive design determines prevailing people's situation under study by evaluating and reporting elements as they are experienced. Descriptive study concentrates on the structure used in the research conduct by the researcher (Cooper & Schindler, 2014). It assesses and reports how things happen. A descriptive design was conducted on the Solio water project to assemble statistical information regarding its sustainability. Qualitative design illustrated the data derived from interview guides.

3.3 Target Population

Target population describes a whole cluster of people which gives sampling number. The target population of this research was 2,984 households who are the beneficiaries of Solio water project in Furaha, Rehema, Bahati, Tetu, Mathingira, Makadamia and Baraka villages, and seven water project officers representing each village (County Government of Laikipia 2022).

Table 3.1: Target population in the seven villages

Village	Households/Beneficiaries
Furaha	420
Rehema	587
Bahati	517

Tetu	511
Mathingira	226
Makadamia	428
Baraka	295
Total	**2,984**

Source: County government of Laikipia (2022)

3.4 Sample Size and Sampling Procedure

The technique of taking a subgroup of significance to study is known as sampling.

3.4.1 Sample Size

The selection of the sample size was determined using Yamane (1967) formula:

$$= \frac{2984}{1 + 2984\ (0.0025)}$$

$$\mathrm{n} = 353$$

The 353 households as shown in Table 3.2 were proportionately disseminated among the seven villages.

Table 3.2: Sample Size

Village	Households	Sample Size
Furaha	420	50
Rehema	587	69
Bahati	517	61
Tetu	511	60
Mathingira	226	27
Makadamia	428	51
Baraka	295	35
Total	**2,984**	**353**

Source: Researcher (2022)

3.4.2 Sampling Procedure

To identify the targeted responders' subclass among the households, stratified sampling was applied. Each and every single household got chosen randomly, merely by chance using simple random sampling. 353 respondents was the sample size, to whom questionnaires were administered by research assistants.

3.5 Data collection Instruments

Both secondary and primary data were utilized in this investigation. Interview guides as well as questionnaires gathered primary data. Information from the residents, their views, awareness, and perceptions about the project was gathered using questionnaires. All questionnaire items were designed to capture the objectives of the investigation.

The data from the seven community water project officers was gathered using an interview guide. Burns and Burns (2021), asserts that conducting interviews is easier than utilizing questionnaires to collect data.

Additionally, secondary data was acquired from literature sources. It was also used to evaluate earlier literature, including textbooks, journal articles, and theses.

3.5.1 Piloting of Research Instruments

This process involves field testing prior to the actual research. Research tools' pre-testing was done before to guarantee concise, clear and relevant questions posed to the respondents. Piloting, according to Orodho (2021), shows ambiguous questions, deficiencies, and its authencity, which is the magnitude to which empirical estimates of notion are properly examined.

Pre-testing was done in Furaha village on 35 households (10%) who were outside the sampled statistics and was not included in this main investigation. Ten beneficiaries and one water project officer attended the meeting. Any ambiguous or biased questions were rephrased or eliminated. Analysis of the data collected was used in instruments improvement before the actual data was collected.

3.5.2 Validity of Research Instrument

Validity is assessing the precision of a research tool. Burns and burns (2021) define validity as the precision and significance of conclusions made by the data. Content validity determined the tool's precision. Mugenda & Mugenda, 2021 argues that, content validity of data derived from any given tool is related to a specific index field or the content of a specific concept. In involved selecting a sample representation of indicators of concept after consultations with the supervisor. During reviewing of the research instrument's validity, the supervisor and lecturer were consulted. Their opinions enabled the instrument to be modified accordingly resulting to increased credibility.

3.5.3 Reliability of Research Instruments

Reliability is the extent to which a tool is able to generate consistent outcomes over multiple trials. It represents the stability of the findings. The research aims at increasing the data collected's reliability data by dealing with it beforehand and stating in the eventual findings.

The research's reliability was identified using the method of test-retest. It involved carrying out same test to the piloted grouping two times then calculating the interrelationship of the two results. A greater relationship shows a greater reliability and therefore, there was a consideration of 0.7 coefficient and above.

3.6 Data Collection Procedure

Firstly, there was seeking a letter from the departmental and NACOSTI's data collection license, which were then used to get approval from the appropriate bodies, and fix an appointment with Laikipia County water officers.

Within the community, there were assistants who received briefs on data collection and ethical considerations after which they were issued with the questionnaires. They were issued with questionnaires and the study approvals. There was a two week duration allowed to respond and return the questionnaires to the designated place. Once the two weeks were over, the assistants picked them and handed them to the researcher. Those

respondents who had challenges reading and understanding the statements sought help from the assistants.

3.7 Data Analysis Techniques

Firstly, analyzation involved sorting to identify all the complete, consistent and accurate responses. With intentions of obtaining the important order, the data was coded first and the replies placed into appropriate groups. A codebook was created and filled with all the questions from the questionnaires. The code, which was entered into a computer, took the responses into account. SPSS was then applied to do data analysis. Descriptive analysis was applied to evaluate quantitative data. Figures and tables displayed the outcomes. Content analysis was used for qualitative data.

3.8 Ethical Considerations

Information privacy and confidentiality was maintained throughout. By excluding respondents' identification, their privacy was protected. Participation by the respondents was voluntary, and those who indicated any form of discomfort giving information were exempted from the study.

3.9 Operationalization of Variables

Each scale of variable examined the instrument employed and each variable technique for analyzing the data are illustrated below.

Table 3.3: Operationalization of the Variables

Objectives	Variable	Indicators	Scale of Measurement	Type of Data Analysis	Tools of Analysis
To determine how community participation in resource mobilization influence sustainability of the Solio Water Project	Resource Allocation	-Mapping of resources -Human resource register -Maintenance schedule	Ratio scale	Quantitative Qualitative	Descriptive (Mean and Standard deviation) Content
To determine how community participation in planning influence sustainability of the Solio Water Project	Project Planning	-Preparation involvement -No. of carried out -Recurrence of start forums	Ratio scale	Quantitative Qualitative	Descriptive (Mean and Standard deviation) Content
To determine how community participation in implementation influence sustainability of the Solio	Project Implementation	-Project time and cost overrun -Delivered to funder's satisfaction -Delivered to or within budget	Ratio scale	Quantitative Qualitative	Descriptive (Mean and Standard deviation)

Water Project					Content
To determine how community participation in monitoring & evaluation influence sustainability of the Solio Water Project	Monitoring & Evaluation	-Assessing project performance by the community - Putting in place lessons learnt during M & E -Assessment of preventive steps by the community	Ratio scale	Quantitative Qualitative	Descriptive (Mean and Standard deviation) Content

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

The findings analysis, presentation, and interpretation are presented in this chapter. To aid in the presentation and subsequently in the interpretation of the results, data analyzation was done using various statistical techniques, including regression analysis and descriptive statistics.

4.2 Response Return Rate

This is the percent of all fully filled up and given back research tools to the researcher (Saleh and Bista, 2017). The study's participants were given 353 questionnaires, while 7 county project water officers were interviewed. In the Table 4.1, are their responses.

Table 4.1 Response Return Rate

	Administered	Responded	Percentage (%)
Questionnaires	353	225	63.74
Interview guides	7	7	100.00
Total	**360**	**232**	**64.44**

225 questionnaires from the Table 4.1 were completely responded to and brought back, yielding a success rate of 63.74%. According to Norman, Sammut, and Griscti (2021), response return rates of more than 50.0% are appropriate for analyzing and publishing, while those of more than 60.0% are exceptional. From these affirmations, 63.74% was excellent for carrying out the study and drawing conclusions on the influence of community participation on sustainability of the Solio Water Project.

4.3 Demographic Characteristics of the Participants & County Water Project Officers

It was crucial to gather the participants' demographic attributes on the basis of age brackets, gender, employment level, experience as well as academic qualifications.

4.3.1 Gender of the Participants

As displayed in the Table 4.2, is the participants' gender.

Table 4.2 Gender of participants

Gender	Frequency	Percentage (%)
Female	123	54.7
Male	102	45.3
Total	**225**	**100.0**

These findings show gender distribution, with 123 female responses (54.7%) outnumbering 102 male respondents (45.3%). This suggests that both genders recognize the need of community involvement in project sustainability. Mixed gender environments are more giving and equitable, and where there are more women than men, performance is improved by fostering good working relationships and procedures (Graham, Walia, and Robinson, 2020).

4.3.2 Age Bracket of the Participants

The participants identified their age brackets. As represented in the Table 4.3, are their replies.

Table 4.3 Age bracket of participants

Age bracket	Frequency	Percentage (%)
21 - 30	34	15.1
31 - 40	79	35.1
41 - 50	60	26.7
50 & Above	52	23.1
Total	**225**	**100.0**

According to the Table 4.3, 79(35.1%) belonged to age bracket 31-40, 60(26.7%) fell within 41-50 years, 52(23.1%) aged between 51 and above, while 34(15.1%) were

between 21-30 years of age. According to the findings, 76.9% were between the ages of 31 and 50. According to the study's findings, respondents who are between the ages of 31 and 50 are more likely to grasp and be involved in the Solio water project than respondents under 30 and above 50 years.

4.3.3 Academic Qualifications

Participants' responses on their academic qualifications are illustrated in the Table 4.4.

Table 4.4 Academic Qualifications

Academic Qualifications	Frequency	Percentage (%)
Degree	97	41.3
Diploma	63	26.8
Certificate	46	19.6
Post Graduate	29	12.3
Total	**225**	**100.0**

From these results, 97(41.3%) of the responders were degree holders, 63(26.8%) were diploma holders, 46(19.6%) attained a certificate, and 29(12.3%) had masters. The results demonstrate that the participants had impressive academic credentials and were thus more likely to provide knowledgeable opinions on how community influenced the sustainability of the Solio water project.

4.3.4 Gender of the county project water officers

Water project officers' gender is displayed in the Table 4.5.

Table 4.5 Gender of water project officers

Gender	Frequency	Percent (%)
Female	2	28.6
Male	5	71.4
Total	**7**	**100.0**

These findings show the gender distribution, with 5 male water officers (71.4%) outnumbering 2 female water officers (28.6%). This suggests that the county government together with NAWASCO considered both genders in the recruitment of water project officers.

4.3.5 Employment Level of the county water project officers

Water project officers' employment level is displayed in the Table 4.6.

Table 4.6 Employment level of water project officers

Employment Level	Frequency	Percent (%)
Water management	2	28.6
Technician	5	71.4
Total	**7**	**100.0**

These findings show the employment level of the water project officers for the Solio water project, with 5technicians (71.4%) and 2 water managers (28.6%). This suggests that the technicians are readily available in case of a breakdown or maintenance.

4.3.6 Years of experience of the county water officers

As displayed in the Table 4.7, water project officers' years of experience is illustrated.

Table 4.7 Years of experience of county water officers

Experience	Frequency	Percent (%)
3 years	4	57.1
2 years	2	28.6
Below 2 years	1	14.3
Total	**7**	**100.0**

These results show the county water officers, 4 (57.1%) having 3 years of experience in that level, 2 (28.6%) 2 years' experience, and 1 (14.3%) below 2 years of experience. This suggests that the water project officers have enough experience in the Solio water project and, thus are more likely to give reliable information about the project.

4.3.7 Academic Qualification of the water project officers

Water officers' responses on their academic qualifications are illustrated in the Table 4.8.

Table 4.8 Academic Qualifications of the water project officers

Academic Qualifications	Frequency	Percentage (%)
Degree	2	28.6
Diploma	4	57.1
Certificate	1	14.3
Total	**7**	**100.0**

From the results, most of the water project officers 4(57.1%) were diploma holders, 2(28.6%) had degrees, and 1(14.3%) reached certificate level. This demonstrates that the water officers were educated and were thus more likely to provide knowledgeable opinions on how community participation influenced sustainability of the Solio Water Project.

4.4.1 The Solio Water Project's Sustainability

The Solio Water Project's sustainability was the study's dependent variable. Table 4.9 presents the descriptive statistics on the Solio Water Project's sustainability. A scale ran from 1 to 5 (1 indicates "Not At All(NA)", 2 "Little Extent(LE)", 3 "Moderate Extent(ME)" 4 "Large Extent(LE)" and 5 "Very Large Extent(VLE)") was used to show the magnitude of statements' understanding or misunderstanding.

Table 4.9: The Solio Water Project's Sustainability

	Statements	NA	LE	ME	LE	VLE	MN	STD V
1	County water officers are easily accessible and offer technical support in case of a breakdown	- (0%)	11 (4.9%)	71 (31.6%)	51 (22.7%)	92 (40.9%)	4.01	0.958
2	The county government of Laikipia sustains the project	10 (4.4%)	16 (7.1%)	48 (21.3%)	61 (27.1%)	90 (40%)	4.22	0.846
3	The financial aid is adequate enough to sustain the water project	6 (5.3%)	12 (6.2%)	23 (17.3%)	71 (27.1%)	113 (44%)	4.22	0.998
4	Clean water is easily accessible	4 (1.8%)	18 (8.0%)	29 (12.9%)	72 (32%)	102 (45.3%)	3.92	1.201
5	There is project continuity after implementation	- (0%)	12 (4.9%)	32 (16.9%)	54 (25.8%)	127 (52.4%)	4.32	0.902
6	Objectives of the project have been met	11 (4.9%)	18 (8%)	53 (23.6%)	66 (29.3%)	77 (34.2%)	3.75	1.154
7	There is continued community ownership of the project	13 (5.8%)	20 (8.9%)	60 (26.7%)	39 (23.1%)	92 (35.6%)	3.76	1.195
8	All the targeted beneficiaries benefit from the project	- (0%)	34 (12.4%)	60 (24.9%)	39 (27.1%)	92 (35.6%)	3.84	1.125
9	There is a functional management body after project completion	- (0%)	8 (3.1%)	37 (27.6%)	78 (33.3%)	101 (36%)	4.22	0.846
	Overall Mean						**4.028**	**1.025**

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Item one in Table 4.9 evaluated if Laikipia county officials are easily available and provide technical help in the event of a breakdown. The resultant was a mean score of 4.01 and standard deviation of 0.958. This demonstrated availability of county water officers incase of breakdowns. Item two evaluated the support of Laikipia County administration towards the Solio Water Project. The responders were in agreement that the county supported and funded Solio. The resultant was a mean score of 4.22 and standard deviation of 0.846. Item three assessed whether the financial assistance by Laikipia county government and NAWASCO maintains Solio Water Project. A resultant mean score of 4.22 and standard deviation of 0.998 was determined, an acknowledgement funds were enough to sustain the project.

Item four assessed whether there was readily available clean water. The resultant revealed a mean score of 3.92 and standard deviation of 1.201, indicating readily clean water to the residents. Item five examined whether there was project continuance after completion. Responder accorded the project is regularly maintained and the county water officers are available in case of breakdowns and repairs.

From the results, Item six evaluated if the Solio water project's aims and goals had been realized. The resultant was a mean score of 3.75 and standard deviation of 1.154. Responders believed the project has been able to supply water to majority of the households and livestock, and connection to some schools. Moreover, item seven assessed whether there is continued ownership of Solio water project by the community. The resultant was a mean score of 3.76 and standard deviation of 1.195. Responders stated that since the community contributed resources, labour, they feel they own the project and are actively involved in repairs and maintenance. Item eight assessed whether the project benefits the targeted beneficiaries. The resultant was a mean score of 3.84 and standard deviation of 1.125. Responders accorded project beneficiaries had benefitted, with about 2,000 households having metered connections including primary and secondary schools in some villages. Lastly, item nine evaluated whether there is a functioning management body following project completion. A resultant mean score of 4.22 and standard deviation of 0.846 was determined. Responders accorded NAWASCO

had a water management body that managed the Solio water project including all other projects related to water in Laikipia.

The resultant overall mean score and standard deviation was 4.028 and 1.025 subsequently. According to these findings, respondents believed that the Solio Water Project is sustainable.

The study was able to collect qualitative data using interview guides. The study sought information from the county project water officers on what may be done to improve the Solio water project's sustainability. The following were their responses:
The following can be used to ensure that there is project sustainability; water rationing to minimize wastage, increased county government funding, a functional management body, use of modern technology, regular maintenance, increased water meter connections with affordable water charge rates to motivate the residents to own and sustain the project, staff training and capacity building within the community. Water resource management is based on economic variables, funding, and regulations. Furthermore, having a member of the community on the Solio Management Water Committee has improved the sustainability and performance of Solio Water Project. As a result, he or she is empowered to participate in choices about the construction of similar future programs.

From the findings, community participation in communal projects is very important. These findings are consistent with Obar, et al, (2017), who focused on community participation in sustainable projects in Nigeria that aimed to strengthen the community socially and found that community participation in project cycle management is a crucial component to project sustainability.

4.4.2 Community Participation in Resource Mobilization

Research's first objective was to determine how community participation in resource mobilization affects the Solio Water Project sustainability. In the Table 4.10, descriptive information on community participation in resource mobilization is displayed.

Table 4.10: Community Participation in Resource Mobilization

	Statements	NA	LE	ME	LE	VLE	MN	STD V
1	Resources were allocated effectively	12 (5.3%)	12 (5.3%)	32 (14.2%)	68 (30.2%)	101 (44.9%)	4.04	1.135
2	The project was funded by the county government	2 (0.9%)	23 (10.2%)	44 (19.6%)	74 (32.9%)	82 (36.4%)	3.94	1.025
3	Financial resources provided for project implementation were well utilized	16 (7.1%)	12 (5.3%)	44 (19.6%)	71 (31.6%)	82 (36.4%)	3.85	1.182
4	The equipment procured by the county government is modern	- (0%)	14 (6.2%)	58 (25.8%)	53 (23.6%)	100 (44.4%)	4.06	0.975
5	Resource mapping was done by Solio residents	- (0%)	16 (7.1%)	48 (21.3%)	69 (30.7%)	92 (40.9%)	4.05	0.953
6	There were no trainings scheduled for the management team on finance management	16 (7.1%)	24 (10.7%)	49 (21.8%)	51 (22.7%)	85 (37.8%)	3.73	1.264
7	There was no fundraising platforms for raising resources for Solio water project	12 (5.3%)	15 (6.7%)	42 (18.7%)	78 (34.7%)	78 (34.7%)	3.87	1.264
8	The community was involved in volunteer support programs to raise funds for Solio water project	15 (6.7%)	11 (4.9%)	46 (20.4%)	76 (33.8%)	77 (34.2%)	3.84	1.150
9	The community was involved in regular and stable methods for acquisition of financial resources	14 (6.2%)	19 (8.4%)	52 (23.1%)	64 (28.4%)	76 (33.8%)	3.84	1.150
10	There were adequate resources in Laikipia County for the Solio water project implementation	- (0%)	16 (7.1%)	50 (22.2%)	68 (30.2%)	68 (40.4%)	4.04	0.956
	Overall Mean						**3.917**	**1.217**

From the findings in Table 4.6, Item one sought to identify if the project resources were efficiently distributed. This evinced a mean score of 4.04 and standard deviation of 1.135. Responders accorded there was efficient distribution of materials, including those contributed by the community. Item two assessed whether Laikipia County government sponsored the Solio Project. The resultant was a mean score of 3.94 and standard deviation of 1.025. Responders stated county government majorly funded the project. Further, item three evaluated if the financial resources provided for project execution were properly utilized. The resultant was a mean score of 3.85 and standard deviation of 1.182. Responders accorded there was no exceeding of project budget and the quality of the work done was maintained throughout.

Item four examined whether the county purchased modernized equipment. This evinced a mean score of 4.06 and standard deviation of 0.975. Responders acknowledged the equipment used was modern. Item five examined whether the community participated in resource mapping. The resultant was a mean score of 4.05 and standard deviation of 0.953. Many responders acknowledged the community was involved in labour and materials mapping. Item six evaluated if there were financial management trainings planned for the management group. The resultant was a mean score of 3.73 and standard deviation of 1.264. Responders believed there were no trainings carried out for the Solio water management.

Moreover, item seven assessed whether the community members performed fundraising to raise project resources. The resultant was a mean score of 3.87 and standard deviation of 1.126. The responders accorded there was no fundraising done towards the project. Item eight assessed whether the community participated in volunteer programs to generate project funds. The resultant was a mean score of 3.84 and standard deviation of 1.150. Most responders did not agree that there were volunteer programs to raise funds, since the project was majorly funded by the county government. Item nine examined whether the community participating in finances acquisition. This evinced a mean score and standard deviation of 3.75 and 1.188, indicating there was no financial acquisition by the community. Lastly, item ten assessed whether Laikipia County had sufficient resources for Solio project execution. The resultant was a mean score and standard

deviation of 4.04 and 0.956 subsequently. There was acknowledgement that resources were sufficient.

An overall mean score of 3.912 demonstrates how valuable community participation in resource mobilization is, its impact to sustainability of water projects, specifically, the Solio water project. According to these findings, the community will only have sustainable water projects if it participates in resource mobilization.

The study was able to collect qualitative data using interview guides. The study sought information from the county project water officers if the community was active in resource mobilization for the Solio water project's sustainability. They answered in the following manner:

The county government majorly funded the Solio project, but in the long run, the project's sustainability depended on the Solio residents. Resources needed for the project implementation were identified through resource mobilization meetings, and members of the community were free to contribute whatever they had to make sure it was properly carried out and had the resources it needed to be completed. The community helped to mobilize resources by providing labor and building supplies. They labored on the project sites by clearing them for the office, water tanks, sanitation blocks and water kiosks. They also excavated trenches for the installation of water pipelines.

The study noted the community actively mobilized the initial project resources in terms of labour and materials. Because of their involvement in resource mobilization, there is a sense of project ownership, which is contributing to the longevity of the project. These findings supported Isham and Kahkone's (2009) observation that the issue of project ownership and sustainability is closely connected to community participation in resource mobilization.

4.4.3 Community Participation in Project Planning

Community participation in project planning's influence on the Solio Water Project sustainability in Laikipia is the next research objective. The Table 4.14 demonstrates the descriptive analysis.

Table 4.14: Community Participation in Project Planning

	Statements	NA	LE	ME	LE	VLE	MN	STD V
1	There was community involvement in planning project meetings	9 (4%)	13 (5.8%)	21 (9.3%)	79 (35.1%)	103 (45.8%)	4.13	1.063
2	Community's views were considered in the design stage	8 (3.6%)	5 (2.2%)	42 (18.7%)	65 (28.9%)	105 (46.7%)	4.13	1.022
3	Community members took part in suggesting plans for moderating effects of the project	13 (6.2%)	6 (9.3%)	25 (20.9%)	75 (30.7%)	106 (32.9%)	4.14	1.086
4	There was an appointed leader within the community	4 (1.8%)	6 (2.7%)	20 (8.9%)	70 (31.1%)	125 (55.6%)	4.38	0.865
5	The project's goals were communicated	9 (4%)	10 (4.4%)	53 (23.6%)	73 (32.4%)	80 (35.6%)	3.90	1.065
6	There was involvement in generating the Solio project plan	7 (3.1%)	6 (2.7%)	13 (5.8%)	90 (40%)	109 (48.4%)	4.29	0.918
7	There was communal agreement on where sanitation blocks and water kiosks will be located	7 (3.1%)	3 (1.3%)	18 (8%)	88 (39.1%)	109 (48.4%)	4.30	0.896
8	The members took part in suggesting the project cost	8 (3.6%)	7 (3.1%)	17 (7.6%)	85 (37.8%)	108 (48%)	4.24	0.975
9	The members of the community pulled resources for achievement of the project	8 (3.6%)	2 (0.9%)	16 (7.1%)	71 (31.6%)	128 (56.9%)	4.28	0.918
	Overall Mean						**4.20**	**0.979**

From the findings, item one assessed whether the community was involved in planning meetings. The resultant was a mean score of 4.13 and standard deviation of 1.063. Responders accorded community was involved in various planning forums. Item two examined whether the community's thoughts and opinions were considered during design stage. The resultant was a mean score of 4.13 and standard deviation of 1.022. Many

responders acknowledged their views and opinions were incorporated into the design of the project. Further, item three evaluated if the community suggested plans for reducing the Solio Project effects. The resultant was a mean score and standard deviation of 4.14 and 1.086 subsequently, an indication of community's involvement in reducing project effects.

Item four examined whether there was an appointed leader within the community. The resultant was mean score of 4.38 and standard deviation of 0.865. Most responders acknowledged there was a leader who represented the community. These findings support those of Martiskainen (2017), who discovered that community leadership played a significant influence in community projects since the majority of the people followed the advice of their leader. Further, Item five assessed whether project's goals were conveyed well throughout the planning stage. A resultant mean score of 3.90 and standard deviation of 1.065 determined. Responders acknowledged the Solio's objectives were discussed during planning meetings. Item six evaluated if there was communal involvement in developing a strategy for executing the Solio Water Project. A resultant mean score of 4.29 and standard deviation of 0.918 is determined. Many responders acknowledged communal involvement in coming up with Solio implementation plan.

Moreover, item seven assessed whether there was communal agreement on sanitation blocks and water kiosks locations within the ward. The resultant was a mean score of 4.29 and standard deviation of 0.896. Responders acknowledged this statement. Similarly, item eight assessed whether the locals determined the project cost. Resultant was a mean score of 4.24 and standard deviation of 0.975, indicating they were involved. Lastly, item nine examined whether there was a significant contribution to the success of Solio by Solio residents. The resultant was a mean score of 4.28 and standard deviation of 0.918. Responders believed in residents' influence on the project's sustainability.

The overall mean score of 4.20 demonstrates how valuable community participation in project planning is, its value to sustainability of water projects, particularly the Solio water project. According to these findings, the community will only have sustainable water projects if it participates in planning of communal projects.

The study was able to collect qualitative data using interview guides. The study sought information from the county project water officers if the community was involved in project planning for the Solio water project's sustainability. Their replies are as follows:

An increased project planning engagement, results to more communal achievements, benefits as well as improved viability of programs after implementation phase. Careful preparation leads to more successful project implementation. Tigithi ward people were very active and engaged during design of the Solio Water Project. Here are some examples of how the community played a part in project planning: identifying the location of water kiosks in the seven villages, participating in project estimation and cost management, developing an implementation plan, participating in resource mobilization, and developing an M & E plan.

It was noted community participation had a significant influence on the Solio water project's sustainability, and as a result, every project should make sure that the community is at the center of its planning to guarantee continuation after donor and experts disengagement. These results support Carvalho and Berssaneti (2015), who claimed that when all project stakeholders are involved in planning, informed decisions are made as well as implementation of project within the anticipated completion period, enabling achievement of project objectives.

4.4.4 Community Participation in Project Implementation

Community participation in project implementation's influence on Solio Water Project sustainability in Laikipia is the research's third objective. The Table 4.18 demonstrates the descriptive analysis.

Table 4.18: Community Participation in Project Implementation

	Statements	NA	LE	ME	LE	VLE	MN	STD V
1	Community involvement in implementation is crucial	9 (4%)	30 (13.3%)	47 (20.9%)	65 (28.9%)	74 (32.9%)	3.73	1.169
2	Project progress was communicated during implementation	13 (5.8%)	32 (14.2%)	28 (12.4%)	72 (32%)	80 (35.6%)	3.78	1.231
3	The locals contributed resources to	11	22	38	65	89		

	sustain the project	(4.9%)	(9.8%)	(16.9%)	(28.9%)	(39.6%)	3.88	1.183
4	The community participated implementing Solio Water Project	5 (2.2%)	18 (8%)	50 (22.2%)	63 (28%)	89 (39.6%)	3.99	1.064
5	Project sustainability is influenced by community's resources	24 (10.7%)	6 (2.7%)	23 (10.2%)	87 (38.7%)	85 (37.8%)	3.90	1.243
6	Decisions are implemented by others except the community	15 (6.7%)	26 (11.6%)	30 (13.3%)	63 (28%)	91 (29.8%)	3.99	1.265
7	There was timely communication on project implementation	39 (17.3%)	11 (4.9%)	37 (16.4%)	56 (24.9%)	82 (36.4%)	3.58	1.457
8	There was no project implementation delay due to lack of resources by the community	23 (10.2%)	17 (7.6%)	14 (6.2%)	87 (38.7%)	84 (37.3%)	3.85	1.282
9	The community put in place their various roles in the project	14 (6.2%)	28 (12.4%)	48 (21.3%)	69 (30.7%)	66 (29.3%)	3.65	1.199
10	There was capacity building within the community on how to work, run and sustain the project	14 (6.2%)	15 (6.7%)	73 (32.4%)	55 (24.4%)	68 (30.2%)	3.65	1.154
11	Water kiosks, drains and sanitation blocks were built using community resources	11 (4.9%)	32 (14.2%)	54 (24%)	67 (29.8%)	61 (27.1%)	3.59	1.174
	Overall Mean						**3.772**	**1.220**

From the findings in Table 4.18, item one examined whether community involvement in implementation is crucial. This evinced by a mean score of 3.73 and standard deviation of 1.169. Responders acknowledged importance of communal involvement in implementation. Item two assessed whether the project progress was reported during implementation. The resultant was a mean score of 3.78 and standard deviation of 1.231, indicating they believed the community received updates on implementation. Further,

item three assessed whether those resources contributed by members of the community impacted the Solio Water Project sustainability. The resultant was a mean score of 3.88 and standard deviation of 1.183. According to resultants, most responders accorded community resources greatly influenced the sustainability of the project.

Item four assessed whether there were communal engagements during the Solio Water Project execution. The resultant was a mean score of 3.98 and standard deviation of 1.064. The community participated in implementation through labour provision. Item five evaluated whether a project's sustainability is heavily impacted by community resources. The resultant was a mean score of 3.90 and standard deviation of 1.243. Responders acknowledged community resources impact sustainability. Similarly, item six examined whether the decisions were implemented by others except the community. The resultant was a mean score of 3.90 and standard deviation of 1.265.

Moreover, item seven evaluated if there was timely communication of project implementation plans. The resultant was a mean score of 3.58 and standard deviation of 1.457. Some responders acknowledged implementation plans were communicated on time. Item eight assessed whether there were project implementation delays owing to lack of community resources. The resultant was a mean score of 3.85 and standard deviation of 1.282. Many participants accorded there were no delays because the resources were readily available. Item nine evaluated if the community put their different responsibilities in the Solio Project. The resultant was a mean score of 3.65 and standard deviation of 1.199, indicating the community put their roles during implementation such as providing materials, labour. Item ten assessed whether there was capacity building within the community on how to handle, run, as well as sustain the Solio Project. The resultant was a mean score of 3.65 and standard deviation of 1.154. Responders accorded this statement. Lastly, item eleven examined whether the resources from within the community constructed kiosk systems, drains, and sanitary blocks. This evinced a mean score of 3.59 and standard deviation of 1.174. Responders agreed the ballast and hardcore provided by the community was used in their construction.

The total mean score of 3.772 demonstrates how important community participation in project implementation is, its values on the sustainability of water projects, particularly

the Solio water project. According to these findings, the community will only have sustainable water projects if it's involved during projects implementation.

The study was able to collect qualitative data using interview guides. The study sought information from the county project water officers if there was communal involvement in project implementation for the Solio water project's sustainability. Their replies are as follows:

The community must understand its role in project execution and be prepared to invest in project funds and resources. During the implementation phase, the community must be given the authority to make choices. Some of the methods Solio people were involved in project implementation include providing labor, attending site meetings and inspections, participating in trainings, and providing supplies such as concrete and aggregate.

From the findings, Solio water project was significantly influenced by community participation in project implementation. Involvement of the people actively in plotting of projects and carrying out can enhance the layout of projects by leveraging local expertise, increase project ownership, assure more fair benefit distribution, boost locally assembled resources, and aid in long term projects viability.

4.4.5 Community Participation in Project Monitoring and Evaluation

Community participation in project M&E's influence on the Solio Water Project sustainability in Laikipia is the research's fourth objective. The table 4.22 demonstrates the descriptive analysis.

Table 4.22: Community Participation in Project Monitoring and Evaluation

	Statements	NA	LE	ME	LE	VLE	MN	STD V
1	Project performance is influenced by monitoring and evaluation by the community	73 (32.4%)	28 (12.4%)	40 (17.8%)	37 (16.4%)	47 (20.9%)	2.806	1.550
2	Monitoring and evaluation techniques are clearly understood by the community	16 (7.1%)	21 (9.3%)	38 (16.9%)	56 (24.9%)	94 (41.8%)	3.85	1.258
3	Project assessment is often carried out	18 (8%)	13 (5.8%)	51 (22.7%)	67 (29.8%)	76 (33.8%)	3.76	1.215
4	There were community engagements in coming up with M&E lessons	17 (7.6%)	10 (4.4%)	21 (9.3%)	102 (45.3%)	75 (33.3%)	3.92	1.138
5	There was no embezzlement of project funds	13 (5.8%)	9 (4%)	36 (16%)	61 (27.1%)	106 (47.1%)	4.07	1.142
6	The society took part in examining the performance of the project	13 (5.8%)	21 (9.3%)	45 (20%)	63 (28%)	83 (36.9%)	3.82	1.191
7	Putting in place lessons learnt during M&E by Solio residents	8 (3.6%)	22 (9.8%)	51 (22.7%)	88 (39.1%)	56 (24.9%)	3.72	1.055
8	Solio Water Project objectives are felt within the community	18 (8%)	18 (8%)	48 (21.3%)	56 (24.9%)	85 (37.8%)	3.75	1.262
9	The project was implemented within the set budget and time	11 (4.9%)	23 (10.2%)	41 (18.2%)	70 (31.1%)	80 (35.6%)	3.811	1.172
	Overall Mean						**3.723**	**1.220**

From the results in Table 4.22, item one examined whether M & E by the community influence project performance. The resultant was a mean score of 2.81 and standard deviation of 1.550. Most responders acknowledged oversight of the community does not influence project performance. Item two assessed whether M & E procedures were

widely recognized by the community. The resultant was mean score of 3.852 and standard deviation of 1.258. Responders accorded that the community was aware of M&E procedures. Item three evaluated if project evaluation is frequently performed. The resultant was a mean of 3.76 and standard deviation of 1.215. Responders believed that project M&E is often carried out.

Item four examined whether there was community involvement in developing M&E courses. This was demonstrated by a mean score and standard deviation of 3.92 and 1.138. Most responders were in agreement. Item five evaluated if there was misappropriation of project funds. The resultant was a mean of 4.07 and standard deviation of 1.142. Responders believed there was no embezzlement of funds during implementation. Similarly item six assessed whether the community took part in evaluation of project performance. The resultant was a mean score of 3.82 and standard deviation of 1.191. Many responders acknowledged that the community was involved.

Moreover, item seven examined whether there was putting in place lessons learnt during M&E lessons by Solio residents. The resultant was a mean score of 3.72 and standard deviation of 1.055. Most responders accorded this statement. Item eight evaluated if the project's objectives are felt by the community. The resultant was a mean score of 3.93 and standard deviation of 1.110. The responders acknowledged the beneficiaries are benefitting from the project. Lastly, item nine assessed whether there was timely project completion within the set budget. This demonstrated by a mean of 3.75 standard deviation of 1.262. Many responders accorded the project did not exceed the budget set and was completed within the project period.

The overall mean score of 3.724 demonstrates how important community participation in project M&E is and how it supports the sustainability of water projects, particularly the Solio water project. According to these findings, the community will have sustainable water projects if participates in projects M&E.

The collection of the qualitative data was carried out by the use of interview guides. The county project water officers were interviewed to find out if the community was involved in project M&E for the Solio water project’s sustainability. Their replies are as follows:

Involving the members of the community in M&E is a designated way to oversee, comprehend, as well as enhance exceptional solutions offered. The oversight committee selected leaders and members within the community to guarantee effective project execution according to the initial plans. Some of the activities included establishment of the M&E team, attendance of site meetings, supervision activities and providing input on the project's relevance. These efforts guaranteed that the project was responsible and transparent, as well as that inefficient procedures and poor performance were identified and minimized.

The findings suggested that the sustainability of the Solio Water Project was influenced by community participation in M&E. These findings are consistent with those of Gordon (2004), who affirmed that for a community-based M&E to be effective, the community must be empowered with methods for project design, implementation, and monitoring that are easy for the locals to use and adapt. Goals and objectives ought to be precise, quantifiable, doable, timely, practical, and explicit. To encourage openness and accountability, pertinent data must be recorded and made available to all stakeholders at all project stages.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

A summary of the findings, conclusions made and recommendations relating to the research variables are discussed in this chapter. The section also includes suggestions for further research.

5.2 Summary of Findings

The aim of the inquiry was to establish how community participation in Laikipia County influenced the sustainability of the Solio Water Project.

5.2.1 Community Participation in Resource Mobilization and Sustainability

This investigation sought to ascertain how community participation in resource mobilization influences the Solio Water Project's sustainability. It was found out that there should be communal involvement in resource mobilization for operations and maintenance, including labour, materials and initial capital. According to the findings, the respondents moderately acknowledged that the resources were allocated effectively, and Laikipia County majorly funded the project. The study further demonstrated the Solio residents participated in mapping of resources, and they greatly acknowledged that there were adequate resources within the county for the Solio water project implementation.

5.2.2 Community Participation in Project Planning and Sustainability

This investigation further attempted to ascertain how community participation in project planning influences the Solio Water Project's sustainability in Laikipia. It was noted there was communal involvement in planning project meetings, and in a great in generating the Solio Water Project plan. From the findings, there was communal agreement on suggested locations for water kiosks and sanitation blocks. The study further showed the views of the Solio residents were considered during design. Additionally, the study showed the goals of the project were communicated. From the findings, community participation in project planning significantly influenced sustainability of Solio Water Project. These findings support those of Mulwa (2008), who

stated that community involvement in planning of projects, committees for implementation, including cost estimation, procurement, identification and allocation of resources are necessary for the realization of effective and sustainable development.

5.2.3 Community Participation in Project Implementation and Sustainability

This investigation further strived to ascertain how community participation in project implementation influences the Solio Water Project's sustainability. The findings stated community involvement in implementation was crucial, and community members put their various roles in the project. It was noted resources (labor, materials) contributed by community members influence the project sustainability. The study further demonstrates that there was capacity building within the community on how to work, run and sustain the Solio Water Project. According to these findings, community participation in project implementation significantly influenced sustainability of Solio water project. These findings support those made by Kumar (2002), who claimed that local people feel more ownership of projects when they are actively involved in their implementation and use local resources. This promotes the sustainability of the projects.

5.2.4 Community Participation in Project Monitoring and Evaluation on Sustainability

This investigation lastly attempted to ascertain how community participation in project M&E influence the Solio Water Project's sustainability. According to the findings, there were communal engagements in identifying M&E lessons. Most respondents believed there was no embezzlement of project funds. Further, there was examining of the project performance, and project assessment is often carried out. Also, by moderate extent, M&E techniques were clearly understood by the community. In great deal, responders believed there was timely implementation of project, within the set budget. From the findings, community participation in project M&E significantly influenced sustainability of Solio Water Project. The findings thus support those made by World Bank (2010a), which claimed that community participation in M&E is essential for project sustainability because it provides new approaches to inclusive change assessment and learning which are sensitive to the community's requirements and desires.

5.3 Conclusion of the study

The objective of the investigation was to establish the influence of community participation on sustainability of the Solio Water Project in Laikipia County. First, the study comes to a conclusion that residents of Solio were involved in resource mobilization which significantly influenced the project's sustainability. The study further concludes that there was communal involvement in provision of resources towards the project such as labour and materials. Therefore, a connection between community participation in mobilization of resources and Solio Project sustainability exists, that is both favorable and statistically significant.

Second, the study comes to the conclusion that the Solio Water Project sustainability is significantly influenced by community participation in project planning. Participating in project planning can have many advantages, such as ensuring that clean water is easily accessible as well as how to maintain the project after implementation phase. The higher the communal involvement in project planning, the higher the project sustainability.

Thirdly, the study comes to the conclusion that the Solio Water Project sustainability is influenced significantly by community participation in project implementation. Additionally, this study concludes that community involvement in the implementation problems leads to remedies, which ultimately guarantees project success and long term viability after implementation phase.

Fourthly, from the study findings, community participation in project M&E significantly influence the Solio Water Project sustainability. Further, the study concludes, for a fruitful project sustainability, stakeholders and members of the community must be involved in its M&E to achieve various project milestones and draw lessons from the failures.

According to the aforementioned findings, empowerment, a greater sense of ownership by community, and capacity development, are essential elements for projects viability after project handover, will result from expanding community participation throughout the projects. Absence of community participation may lead to financial deficit,

beneficiary rejection of the projects, legal repercussions, conflicts, and inadequate or unsustainable projects.

5.4 Recommendations of the study

On the basis of this investigation's objectives and determinations, recommendations have been made.

5.4.1 Recommendations for Policy and Practice

i. It should be deliberate for the community to participate in resource mobilization. The community should get involved in mobilizing labour, raising the necessary startup capital and finding resources for project operations and general maintenance. This will improve project efficiency and ultimately result in project sustainability.

ii. Community participation in project planning may significantly reduce implementation period thus ensure project's sustainability. Participation in planning also guarantees project ownership and informs early on what the community can anticipate to contribute to the project, ensuring timely completion of the project in accordance with the resources allotted, the objectives specified, and the deliverables.

iii. In order to foster project ownership and teach the community how to manage the project with little to no monitoring after completion, project implementers must intentionally work to involve the community in project implementation. This degree of commitment will guarantee that the initiative will sustainably serve the community under their direction. This will make sure that the community is aware of the projects going on around them, enabling them to manage them effectively once the financial and managerial support has been cut off.

iv. M&E of projects within communities is neglected. It is therefore necessary to improve monitoring and evaluation efforts by offering trainings and allocating funds to support M&E within the community.

5.4.2 Suggestions for further research

i. A study on how community participation influence sustainability of water projects in other counties should be carried out to aid in the comparison and extrapolation of data findings.

ii. A study on how community involvement in development programs influence environmental protection in Laikipia County and other counties.

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APPENDICES

Appendix I: Letter of Introduction

Jane Wangari Mukundi
L50/11522/2018

Dear participant,

RE: REQUEST FOR PARTICIPATION IN A RESEARCH STUDY

I'm a student studying Masters of Arts in Project Planning & Management at the University of Nairobi. I'm presently investigating **"*Influence of community participation on sustainability of the Solio Water Project*".** This research shall remain confidential and is only applicable for academics only.

All of your reactions and comments will be highly valued. Many thanks.

Respectfully,
Jane Wangari Mukundi

Appendix II: Survey Questionnaire for Solio Water Project's beneficiaries

This research questionnaire intends to identify and gather information regarding the influence of community participation on sustainability of the Solio Water Project. Do not include your name or any information that could be used to identify you as a respondent so that confidentiality is maintained. However, you are urged to be as truthful as you can when responding to questions.

SECTION A: BASIC INFORMATION

1. What gender are you?

   Male [ ] Female [ ]

2. State your age bracket

   21- 30 [ ]

   31– 40 [ ]

   41 – 50 [ ]

   51 & Above [ ]

3. State your academic Qualification

   Certificate [ ], Diploma [ ], Degree [ ], Masters/PhD [ ]

SECTION B: Water Projects Sustainability in Laikipia County

Below statements are linked to the research on communal water projects sustainability. Using a scale of 1 to 5 where: 1 indicate "Not at all", 2 "Little Extent", 3 "Moderate Extent", 4 "Large Extent" and 5 "Very Large Extent" to indicate the extent of your understanding of each statement

Statements	**5**	**4**	**3**	**2**	**1**
County water officers are easily accessible and offer technical support in case of a breakdown					
The county government of Laikipia sustains the project					
The financial aid is adequate enough to sustainability the water project					

Clean water is easily accessible					
There is project continuity after implementation					
Objectives of the project have been met					
There is continued communal ownership of Solio water project					
All the targeted beneficiaries benefit from the project					
There is a functional management body after project completion					

SECTION C: Community Participation in Resource Mobilization

How do you understand these statements on community participation's influence in resource mobilization? 1 imply "Not at all", 2 "Little Extent", 3 "Moderate Extent", 4 "Large Extent" and 5 "Very Large Extent"

Statements	**1**	**2**	**3**	**4**	**5**
Resources are allocated effectively					
The project was funded by the county government					
Financial resources provided for project implementation were well utilized					
The equipment procured by the county government is modern.					
Resource mapping was done by Solio residents					
There were trainings scheduled for the management team on finance management					
The community was involved in fundraising platform for raising resources for Solio water project					
The community was involved in volunteer support programs to raise funds for Solio water project					
The community was involved in regular and stable methods for acquisition of financial resources					
There were adequate resources in Laikipia County for					

the Solio water project implementation					

SECTION D: Community Participation in Planning

To what extent do you agree with the following attributes on community participation in planning? 1 imply "Not at all", 2 "Little Extent", 3 "Moderate Extent", 4 "Large Extent" and 5 "Very Large Extent"

Statements	**1**	**2**	**3**	**4**	**5**
There was community involvement in planning project meetings					
Community's views were considered in the design stage					
Community members took part in suggesting plans for moderating effects of the project					
There was appointed leader within the community					
The project's goals were communicated					
There was involvement in generating the Solio project plan					
There was communal agreement on suggested water kiosks as well as sanitations blocks location in Tigithi ward					
The members took part in suggesting the project cost					
There was communal pulling of resources for the project achievement					

SECTION E: Community Participation in Project Implementation

To what extent do you agree with the following attributes on community participation in project implementation? 1 imply "Not at all", 2 "Little Extent", 3 "Moderate Extent", 4 "Large Extent" and 5 "Very Large Extent"

Statements	**1**	**2**	**3**	**4**	**5**
Community involvement in execution is crucial					

Project progress was communicated during implementation					
The locals contributed resources to sustain the project					
The community participated implementing Solio Water Project					
Project sustainability is influenced by community's resources					
Decisions are implemented by others except the community					
There was timely communication on project implementation					
Project implementation delayed due to lack of resources by the community					
The community failed to put in place their various roles in the project					
There was capacity building within the community on how to work, run and sustain the project					
Water kiosks, drains and sanitation blocks were built using community resources					

SECTION F: Community Participation in Project Monitoring and Evaluation

To what extent do you agree with the following attributes on community participation in project monitoring and evaluation? 1 imply "Not at all", 2 "Little Extent", 3 "Moderate Extent", 4 "Large Extent" and 5 "Very Large Extent"

Statements	**1**	**2**	**3**	**4**	**5**
Performance of project is influenced by M&E by the community					
Monitoring and evaluation techniques are clearly understood by the community					
Project assessment is often carried out					

There were community engagements in coming up with M&E lessons					
There was embezzlement of project funds					
The society took part in examining the performance of the project					
Solio residents put in place M&E lessons					
Solio water project's objectives are felt within the community					
The project was implemented within the set budget and time					

THANKS IN ADVANCE!

Appendix III: Interview Guide

1. What gender are you? Female [ ] Male [ ]

2. State your employment level

Prompt……

3. How many years of experience do you have in that level?

Prompt……

4. State your highest level of education

Prompt……

5. In your own view, was the community involved in mobilizing for resources for the Solio water project in Laikipia County? Please explain.

Prompt……

6. In your own view, explain how the community was involved in project planning for the Solio water project

Prompt……

7. Please explain how involved the community was in project execution of Solio water project

Prompt……

8. In your view, explain how the society participated in projects' the Solio Water Project M&E?

Prompt……

9. In your own view, state what can be done to enhance sustainability of Solio water project

Prompt……