

Collaborative Currents: Assessing the Role of Community Involvement in the Durability of Kajiado County's Water Projects

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Abstract

Despite the abundant natural resources available in Kajiado County, including soda ash at Lake Magadi, marble stones at Loodokilani, limestone, and sand on seasonal riverbeds, and rich wildlife, water security remains a significant challenge, especially with the fast-growing population. The expanding population, drawn by land availability and burgeoning economic opportunities in the county, is placing a considerable strain on existing water resources, amplifying the urgency for sustainable water project initiatives. Notably, a recurring problem in Kenya, particularly pronounced in rural regions, is the stagnation and decay of water projects. This situation is often exacerbated by limited community engagement in various phases of the water project lifecycle, leading to poor execution, compromised sustainability, and diminished utility for the intended beneficiaries. Previous investigations have overlooked crucial aspects of community participation, such as the planning, implementation, monitoring, and evaluation in water project cycle. Therefore, this study was geared toward bridging this knowledge gap by determining the influence of comprehensive community participation on the sustainability of water projects funded by the County Government of Kajiado. It is recommended that during all phases of water projects, community members are encouraged to participate. Participation ensures that the projects meet community needs and preferences, contributing to their sustainability on a whole. The study recommendation is to incorporate and enhance community participation at all stages of water projects - planning, implementation, and monitoring and evaluation.

Key Words: *Community Participation, Sustainability, Water Projects, Monitoring and Evaluation, Kajiado Subcounty*

Introduction

Communities have been urged to participate since the 1970s so that projects can be sustained. According to Warburton, Wilson, and Rainbow (2015), a participative approach improves the success of any project. Participation from the community also improves the effectiveness and efficiency of programs. Proponents of the claim that involvement contributes to community development project sustainability have frequently relied on earlier extensive examinations of specific areas of study, which detractors have quickly criticized as rife with flaws. Because the cases are tiny and unofficial methods allow for a recognized assessment of the outcomes, this is the case (Wabwoba, 2017).

According to Chess (2016), community engagement entails community participation as well as authority over the decision-making process. This signifies that community engagement is a crucial route in which communities influence and authenticate associates in development activities or resource mobilization. Citizens are educated and their capability grows as a result of involvement, according to Assaf (2018). A strategy for influencing life decisions is participation. The people also gain political power through it.

A community participation process refers to people participating in public goods, voicing their opinions, and taking ownership of changes in the community. According to Akumu (2017), participation refers to a community's authority over and participation in decision-making processes. Thus, it is a proactive process of community involvement whereby the community affects development innovation and resource mobilization.

Participation boosts people's abilities, keeps projects going, and helps communities become self-sufficient. Community involvement can therefore influence long-term national development through the viability of development projects. Abdisalan (2015) argues that

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there is an increasing awareness that development involves achieving human goals and progress, especially collective or individual well-being, as well as increasing national wealth.

Planning and implementing development initiatives involve the participation of communities (European Union, 2015). As a form of development assistance (CBD), community-based development is rapidly expanding. According to Akpor (2016), CBD programs that prioritize community engagement not only aim to override dominant authority in a way that empowers the less fortunate but also to give them greater influence over project aid. In the study conducted by Githinji (2019), an exploration of the determinants impacting the resilience of community-based water initiatives in Kenya was undertaken, with a particular emphasis on the Kajiado Central sub-county. Through the research conducted, Githinji (2019) discovered that the involvement of the community, socioeconomic variables, financial resources, and selection of technology all bear significant influence on the longevity of community-based water projects within the Kajiado Central sub-county. Upon completing this research, Githinji (2019) advised incorporating community participation into project management as a key component, and that beneficiaries should be involved throughout the entire project lifecycle and decision-making process to ensure sustainability and ownership.

In Tapatayia's (2019) research water resources were effectively utilized when communities were involved. It was also found that community leadership should be fostered by engaging all members of the community to prevent disputes regarding the beneficiaries' access to water and its connection to their households. Furthermore, to ensure continued support for the project, financial assistance should be augmented through donor-funded programs and the diligent use of funds should be guaranteed. Thus, Tapatayia (2019) came to the conclusion that the Namelok Water Project's performance was significantly impacted by household attitudes, capacity building, and community involvement. Therefore, in order for stakeholders to benefit from their investments, management needs to convince them to take part in the sponsored projects. As a result, all parties engaged should be included, especially in seminars aimed at increasing capacity and regular training sessions for beneficiaries on water management. According to Tapatayia (2019), in order to improve the sustainability of water projects in the county, there should be more community involvement in project development and execution.

Indian universities have formulated a policy on integrating community engagement best practices into classroom instruction. However, this policy's scope is limited and is not typically an official element of student academic instruction. Nevertheless, this policy does facilitate the formation of partnerships between institutions and their respective host communities. This is particularly significant since both the higher education sector and the community hold essential roles in a country's human resource development, and as such, their objectives are believed to be inherently aligned (National Assessment and Accreditation Council, 2006).

The project uses a participatory development method for the planning, building, and management of water delivery schemes, according to Mimrose, Gunawardena, and Nayakakorala (2011). CBOs represent the community throughout the project and participate in decision-making. Construction, use, and upkeep of water supply and sanitation infrastructure are entirely the CBOs' responsibility. It follows a demand-driven approach, wherein the community understands its demand and available water resources, ensuring the scheme's long-term sustainability. The Pradeshiya Sabha selects the Grama Niladhari Divisions with a genuine demand for safe water. The community receives the scheme once construction is complete. A tariff system is established by the CBOs to pay for operators, electricity, repair costs, and other expenses (Mimrose et al., 2011).

The Tanzanian situation, historically characterized by its socialist republic (Ujamaa), appears to lend credence to this notion. World Bank Group operations can be improved through citizen engagement when citizens participate in healthcare, education, and water provision projects. This, in turn, leads to better outcomes. Researchers found that community monitoring of healthcare facilities reduced infant mortality, resulted in a surge in outpatient services, and increased attendance by qualified medical practitioners during childbirth.

In 2010, Kenya ratified a new constitution that encompasses Chapter 11 Article 174, to advance the welfare of its citizens (d). This section, in particular, underscores the right of communities to manage their affairs and spearhead their developmental agenda (Constitution of Kenya COK, 2010). Kenya, a nation-state, has endeavored two forms of decentralization, namely devolution and de-concentration. Devolution refers to the transfer of authority to duly constituted governmental entities to carry out specific or residual responsibilities. Examples of such responsibilities include healthcare, early childhood education (ECE), agriculture, and extension, among others. While de-concentration consists of committing to delegate power to staff who do not work in Nairobi, the capital city of Kenya, the headquarters were initially located in Nairobi (Barkan and Chege, 1989). According to Maina (2005), the decentralization efforts have primarily focused on de-concentrating central government tasks by relocating them to lower levels of governance closer to the control of citizens.

The policy reform is being implemented against the backdrop of Kenya's persistent lack of water accessibility. According to the Kenya Water Services Regulatory Board's annual performance report (WASREB, 2019), 54 percent of Kenyans have access to

water, with considerable differences between geographic locations. Researchers found that ASAL counties have less than 30% access to safe water compared to other counties which have 60%. Even within Kajiado County, however, there were huge discrepancies, with certain sub-counties having a low-performance score of less than 30%. Even when the community is involved in resource mobilization and management, low performance persists (WASREB, 2019). As a result, the observations pleaded for explanations as to why water projects continue to die despite policy adjustments. The goal of this study is to see how community participation influences the long-term viability of Kajiado County-funded water projects.

Literature Review

According to Noori (2017), there is a growing concern about the sustainability of development programs, especially in developing countries like Afghanistan. It is expected that the application of participatory techniques to community development in the nation will improve the long-term viability of these initiatives. Silvius et al., (2012) emphasize that sustainability goes beyond environmental concerns and encompasses social and economic dimensions as well. In order to maximize project profitability, Silvius and coworkers (2012) recommend project managers consider environmental, economic, and social impacts. Silvius et al., (2012) provide practical guidance on how to incorporate sustainability into project planning, execution, monitoring, and evaluation.

In contrast to simply receiving a piece of the project, Akumu & Onono (2017) contend that community participation enables beneficiaries to shape and carry out development programs. In addition to preventing sabotage by the government or powerful economic or social groups, local conflicts from getting worse, and extra expenses, Akumu and Onono (2017) claim that it could boost project efficacy, efficiency, social acceptability, cost recovery, and sustainability. To be sustainable, Akumu & Onono (2017) argue that community participation throughout all phases of the project cycle is crucial, as is coordination among the technical, managerial, and financial facets of a development project.

Spaling, Brouwer, and Njoka (2014) underscored the significance of community involvement and ownership in achieving sustainable outcomes. Planning and decision-making communities that actively participated contributed more effectively to the project by feeling more responsible. A critical factor in maintaining and repairing the project was financial resources, since they ensured the project's success. Moreover, the presence of effective governance structures, such as water user committees, ensured accountability and proper management of the water supply project. Spaling et al. (2014) emphasized the need for participatory approaches that empower communities, establish adequate funding mechanisms, and ensure transparent and accountable management systems.

Oino, Towett, Kirui, and Luvega (2015) argue that a considerable amount of money has been invested globally in communities to improve the standard of living. It is nevertheless one of the most challenging aspects of these projects to endure after donors withdraw, and for the beneficiaries to continue benefiting from the projects and acknowledging their participation. Sustainability, according to Oino et al. (2015), is the decisive factor that distinguishes successful community-based projects from unsuccessful ones.

Ofuoku (2011) underscored the significance of community organization in projects. The formation of social groups, regular meetings, and community development committees were the means by which communities were organized. Ofuoku (2011) made the suggestion to increase the degree of engagement in projects and to continue using community organizing strategies, emphasizing regular conferences and the use of incentives and penalties to encourage individuals to get involved in development initiatives. Conclusively, Ofuoku (2011) asserted that the greater the involvement of the community's citizens in water projects, the greater the sustainability of said projects.

Olukotun (2008) asserts that community participation in community development activities dates back to the beginning of human history. Throughout history, collaboration has helped people live better lives. Prior to the foundation of colonial administration, communities worked together to organize resources, provide functional facilities, and make physical changes in the sociopolitical and economic spheres of their existence. One important aspect of this time, according to Olukotun (2008), was the use of community labor. Communities used para-scientific techniques to respond to the media and development's demands despite lacking access to modern technology, finance, and management resources. When a community uses techniques and tactics that combine science and rurality instead of just depending on scientific or rural strategies, it is referred to as para-scientific (Olukotun, 2008).

According to Panthi and Bhattarai (2008, August), the utilization of monitoring and evaluation systems in the appraisal of water facility projects has empowered decision-makers to formulate plans for future projects' sustainability based on the performance of current ones. The assessment of the effectiveness of such projects is subject to several subjective and objective opinions, particularly with community-based projects where sustainability is a crucial concern for all stakeholders. To monitor and evaluate the

sustainability of these projects, different indicators are identified to measure their effectiveness. Panthi and Bhattarai (2008, August) have developed a framework for an integrated evaluation system in their study using analytical hierarchy processes for multiple-criteria decision-making. The results in Nepal have demonstrated that such a framework provides significant value in furnishing information and input for different levels of decision-making.

Dongol et al. (2021) investigate Turkana County's effective community engagement aspects. In Turkana County, cultural practices were found to be positively correlated with community engagement by Dongol et al. (2021). The study also showed that, in order for Turkana County communities to effectively participate in water projects, they should accept gender diversity and ownership. Dongol et al. (2021) suggest holding capacity-building workshops to raise community understanding of issues related to water supply. This will boost local involvement in the creation and advocacy of projects that meet community requirements. Sustainability depends on information sharing, community participation in all phases of water project implementation, and the application of local expertise in water project implementation.

Methods

Social Systems Theory was used in this study. Several academics have contributed to the development of the Social Systems Theory throughout the years, most notably Talcott Parsons (1951), Niklas Luhmann (1995), and Ludwig von Bertalanffy (1968). The theory is a cornerstone of sociological and organizational research. It provides a lens through which societies, organizations, or communities can be analyzed as cohesive systems, made up of interrelated pieces operating in harmony. Its roots are in the larger subject of systems theory. According to theory, a system works best when each part depends on the others. Systems aim for stability and will oppose outside influences that could upset this equilibrium. Large systems also have subsystems that function independently but collaborate as a whole. Finally, boundaries enable the effective operation of a system by dividing it from its external environment (Luhmann, 1995).

Kajiado County was the area of study. The County covers 21,902 km² of land. Each of the five subcounties of Kajiado County have its own government structure. The county was targeted because of its susceptibility to ongoing droughts, the presence of trans-border cattle trading routes, and its concentration around concerns like pasture reserve areas. There is therefore increasing need for sustainability of water projects to ensure adequate water supply. The area was viewed as suitable for the examination because of the distribution of county-funded water projects in the community. Given that the study area has structured water projects that have been in operation, the investigation was able to pick up several aspects of community involvement that are probably going to impact the sustainability of water projects concerning community participation.

The target population of this research was all the beneficiaries of community water projects in Kajiado County. According to data from the Water Department in Kajiado County Government, there are 140 community water projects with 1460 households who are beneficiaries of the projects. These projects in Kajiado South include 34, 35, 25, 25, 26, 26, and 20. Since household heads are household's main decision-makers, the study targeted household heads as participants.

The study utilized a mixed approach which enabled the combination of qualitative and quantitative approaches of data collection allowing the researcher to collect both qualitative data and quantitative data. The quantitative survey had a Likert scale level of questions targeting the study indicator variables for project planning, implementation, monitoring & evaluation and sustainability. The study used descriptive design to accurately describe community participation and sustainability of water projects in Kajiado County. The design allowed collection of data on the influence of community participation and sustainability of county funded water projects exactly as they were without manipulating or adding any information.

Using SPSS software, the data collected through questionnaires was analyzed following the fieldwork. The quantitative data was scrutinized utilizing the SPSS software version 24, which is a highly methodical program specifically designed for statistical data analyses. This process involved descriptive statistics including frequency, mean, standard deviation, and percentages, resulting in tabular results. The software's systematic approach to data analysis facilitates the interpretation of results, making them more accessible. Data was thematically organized to ensure a comprehensive approach to address the research questions, thereby enhancing the ease of interpretation and reporting. The qualitative data analysis was also structured according to the study's primary themes. The study was conducted strictly according to ethical principles to ensure participant safety, maintain credibility, and ensure integrity.

Results

The purpose of the study was to analyze the influence of community participation on the sustainability of water projects funded by the county government of Kajiado through analyzing participation in planning, implementation and monitoring and evaluation.

4.1 Community Participation & Sustainability

4.1.1 Longevity of Water Projects

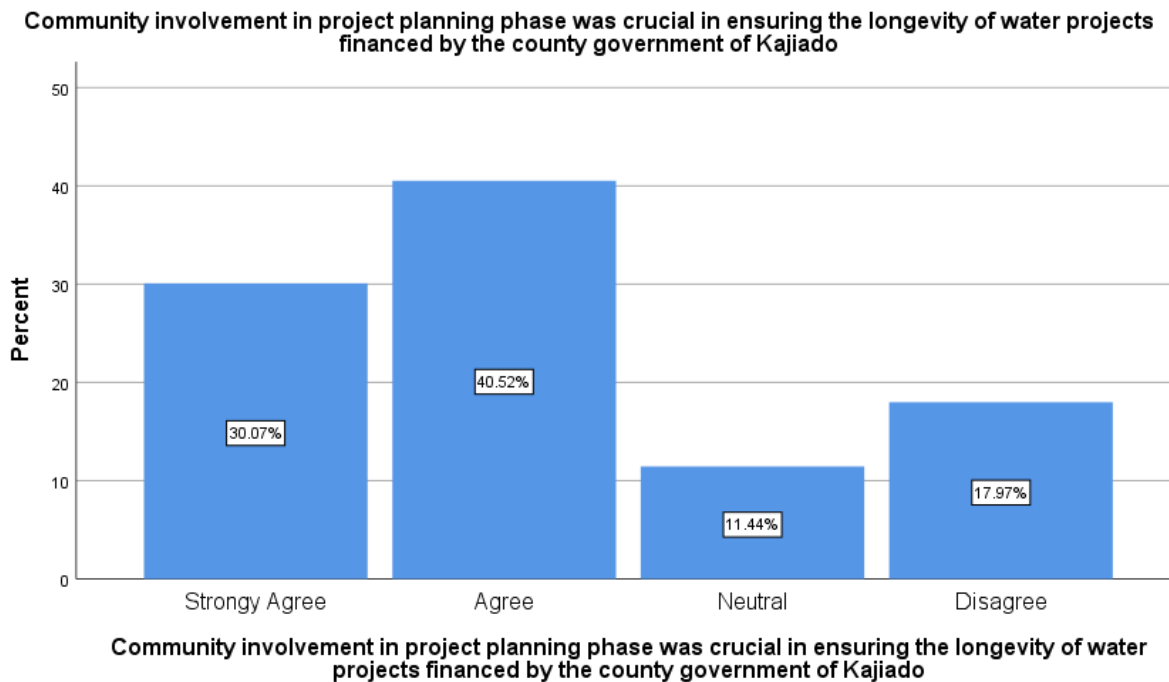


Figure 1: Longevity of water projects

Source, Researcher (2023)

On whether Community involvement in project planning phase was crucial in ensuring the longevity of water projects financed by the county government of Kajiado, 30.07% selected strongly agree, 40.52% selected agree, 11.44% selected neutral while 17.975 selected disagree. A combined total of 70.59% of the respondents either strongly agree or agree that community involvement in the project planning phase was crucial in ensuring the longevity of water projects. A majority of participants believe community involvement can improve the sustainability of water projects by involving them in planning. Neutral responses account for 11.44% of the total, suggesting that there is a group of respondents who do not hold a strong opinion on the matter or may not have enough information to make a judgment. Interestingly, a substantial percentage (17.97%) of respondents disagreed with the statement, indicating that they do not believe community involvement in the project planning phase is crucial for the longevity of water projects. In summary, while the majority of respondents believe that community involvement in the project planning phase is important for ensuring the longevity of water projects financed by the county government of Kajiado, there is a notable minority that disagrees. The strong alignment (70.59% agreement) between the study's respondents and the sentiments expressed by Spaling et al. (2014) is evident. Just as Spaling and colleagues emphasized the role of community involvement in achieving sustainable outcomes, a significant majority of respondents in the current study affirmed the significance of community involvement in the planning phase for ensuring the longevity of water projects. This concurrence underscores the universal relevance and application of community involvement in water project planning, not just in Kajiado County but possibly in other similar contexts. It appears that communities participate actively in planning and decision-making when they feel ownership and responsibility over water projects. The mention of effective governance structures like water user committees by Spaling et al. (2014) could be a potential avenue to explore in enhancing community involvement, especially for the notable 17.97% who disagreed with community involvement's significance. Bakalian and Wakeman (2009) highlighted the role of financial mechanisms in the sustainability of water projects. It is often essential for such projects to be financially sustainable that communities contribute monetarily and otherwise. The community's involvement in the planning phase, as supported by a majority of the study's respondents, could potentially facilitate discussions around financing models that are agreeable and sustainable for the community. This might help in mitigating the "moral hazard" pointed out by Bakalian and Wakeman, where certain capital financing models could undermine post-construction community self-reliance. The 11.44% neutral and 17.97% disagreeing respondents present an opportunity. While the majority see the value of community participation in planning, this significant minority could provide insights into potential barriers or challenges. They might represent a segment that feels marginalized or believes in a different approach to project planning and sustainability.

4.1.2 Design Meeting the Actual Needs of the Community

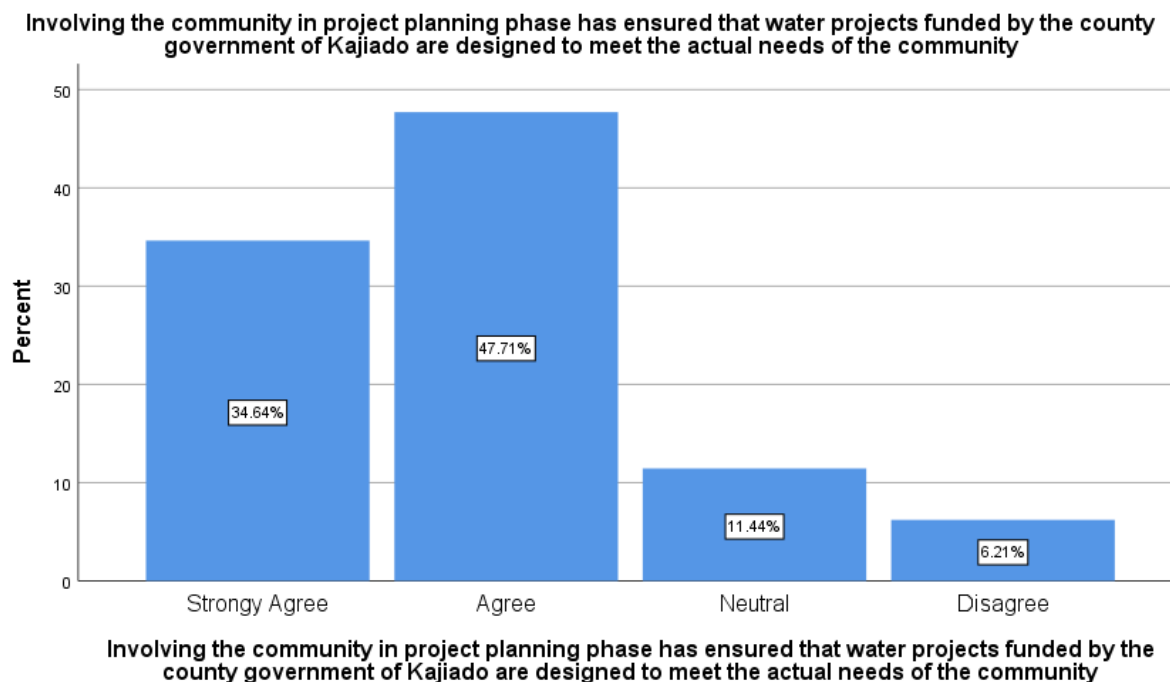


Figure 2: Design meeting the actual needs of the community

Source, Researcher (2023)

On whether involving the community in project planning phase has ensured that water projects funded by the county government of Kajiado are designed to meet the actual needs of the community, 34.64% selected strongly agree, 47.71% selected agree, 11.44% selected neutral while 6.21% selected disagree. A combined total of 82.35% of the respondents either strongly agree or agree that involving the community in the project planning phase has helped to ensure that water projects are designed to meet the actual needs of the community. Majority of participants believe that community involvement in the planning process promotes more tailored projects for their communities. Neutral responses account for 11.44% of the total, suggesting that there is a group of respondents who do not hold a strong opinion on the matter or may not have enough information to make a judgment. A smaller percentage (6.21%) of respondents disagreed with the statement, indicating that they do not believe that community involvement in the project planning phase has ensured that water projects are designed to meet the actual needs of the community. In summary, the majority of respondents believe that involving the community in the project planning phase has a positive impact on ensuring that water projects funded by the county government of Kajiado are designed to meet the actual needs of the community.

According to the study, involving the community in the planning phase increases the likelihood of achieving projects tailored to the community's needs. Spaling et al. (2014) had already underlined the importance of community involvement for sustainable outcomes. This active participation ensures projects are not only maintained but also are more likely to be embraced because they resonate with the community's needs and aspirations. The overwhelming majority (82.35%) agreeing with the sentiment suggests a robust alignment with this assertion from the literature. Considering the concerns raised by Bakalian and Wakeman (2009) regarding NGOs' role, it becomes imperative to understand their role in the community planning process.

Achieving the community's needs is possible if NGOs align their goals and strategies with their needs and wants. Thus, the interaction between NGOs and community participation, especially in the planning phase, becomes an area of interest. It is possible from Bakalian and Wakeman's (2009) focus on the financial aspect that when projects are tailored to meet community needs, the community will be more likely to invest in them. This inclination might reduce the moral hazard mentioned by Bakalian and Wakeman, which arises from certain capital financing models. Having projects tailored to community needs might strengthen community self-reliance after construction, as the community sees value in them. Spaling et al. (2014) highlighted the need for effective governance structures. When communities are involved, and projects are tailored to their needs, it might be easier to establish and sustain these governance structures, such as water user committees. Such structures, in turn, can further ensure that the projects remain aligned with the community's evolving needs. The finding offer strong support for the stance that community involvement in the planning phase leads to water projects that are better tailored to the actual needs of the community.

4.1.3 Transfer of Skills and Knowledge Related to The Management and Maintenance of Water Projects

Table 1: Transfer of skills and knowledge related to the management and maintenance of water projects

	N	Minimum	Maximum	Mean	Std. Deviation
Involving the community in project implementation phase led to transfer of skills and knowledge related to the management and maintenance of water projects leading to their long-term sustainability	306	1	4	1.54	.668
Valid N (listwise)	306				

Source, Researcher (2023)

According to the data the average rating given by respondents, to the involvement of the community in the project implementation phase regarding the transfer of skills and knowledge related to water project management and maintenance for long term sustainability was 1.54 with a deviation of 0.668. This indicates that most respondents strongly agree (to 1 on the Likert scale) that involving the community in this phase results in skill and knowledge transfer enhancing the long-term sustainability of water projects. The low standard deviation suggests a high level of agreement among respondents. In conclusion based on these statistics it can be inferred that involving the community during project implementation is seen as beneficial, for transferring skills and knowledge in water project management and maintenance thereby contributing to their long-term sustainability.

Oino et al. (2015) emphasized the importance of sustainability in community-based projects. While they discussed the global investment in community projects to enhance the standard of living, they acknowledged the challenges faced post-donor withdrawal. The present finding demonstrates a tangible solution to this issue; by involving the community during the implementation phase, there is a direct transfer of essential skills, ensuring that the community can independently manage and maintain the project in the long term. The conclusion drawn from the data ties back to Nyatichi's (2017) assertion about the role of community members in the upkeep of water infrastructure. While the researcher highlighted a partial involvement of the community post the identification step, the current study underscores the community's eagerness and the benefits of their active involvement during the implementation phase. This enhanced involvement arguably fills the gap identified by Nyatichi, ensuring that essential skills and knowledge are transferred to those directly benefiting from the project. Furthermore, the insights from Mimrose et al. (2011) regarding the importance of support services and capacity-building for Community-Based Organizations align with our findings. The direct involvement of the community during implementation is, in essence, a form of capacity building. It offers hands-on experience, enabling community members to directly learn and hone skills crucial for project management and maintenance. The present study plugs an essential gap in the existing literature by demonstrating the tangible benefits of community involvement during the project implementation phase.

4.1.4 Promotion of the use of locally available resources, and knowledge

Table 2: Promotion of the use of locally available resources, and knowledge leading

	N	Minimum	Maximum	Mean	Std. Deviation
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Involving the community in project implementation phase promoted the use of locally available resources, and knowledge leading to the sustainability of water projects funded by the county government of Kajiado	306	1	4	1.79	.633
Valid N (listwise)	306				

Source, Researcher (2023)

On whether involving the community in project implementation phase promoted the use of locally available resources, and knowledge leading to the sustainability of water projects funded by the county government of Kajiado had a mean of 1.79 and a standard deviation of 0.633. The statement had a mean of 1.79 with a standard deviation of 0.633. The mean value of 1.79, which is closer to 1 (Strongly Agree) and 2 (Agree) on the Likert scale, indicates that the majority of respondents believe that involving the community in the project implementation phase does promote the use of locally available resources and knowledge, contributing to the sustainability of water projects funded by the county government of Kajiado. The standard deviation of 0.633 suggests that the responses are relatively close to the mean, indicating a moderate to strong level of agreement among respondents. In summary, based on the mean value and standard deviation, it can be inferred that most respondents believe that involving the community in the project implementation phase is beneficial in promoting the use of locally available resources and knowledge, leading to the sustainability of water projects funded by the county government of Kajiado.

The findings underscore the paramount importance of community involvement in the project implementation phase of water projects funded by the county government of Kajiado. Such involvement evidently promotes the utilization of locally available resources and knowledge, fostering the sustainability of these initiatives. The findings resonate with Nyatichi (2017), who emphasizes the indispensable role of community members in the upkeep and functioning of water infrastructure. This collaboration in the project implementation phase can be instrumental in nurturing an enhanced sense of ownership, thus fortifying the foundation for sustainable project outcomes.

4.1.5 Promotion of The Use of Innovative and Sustainable Approaches

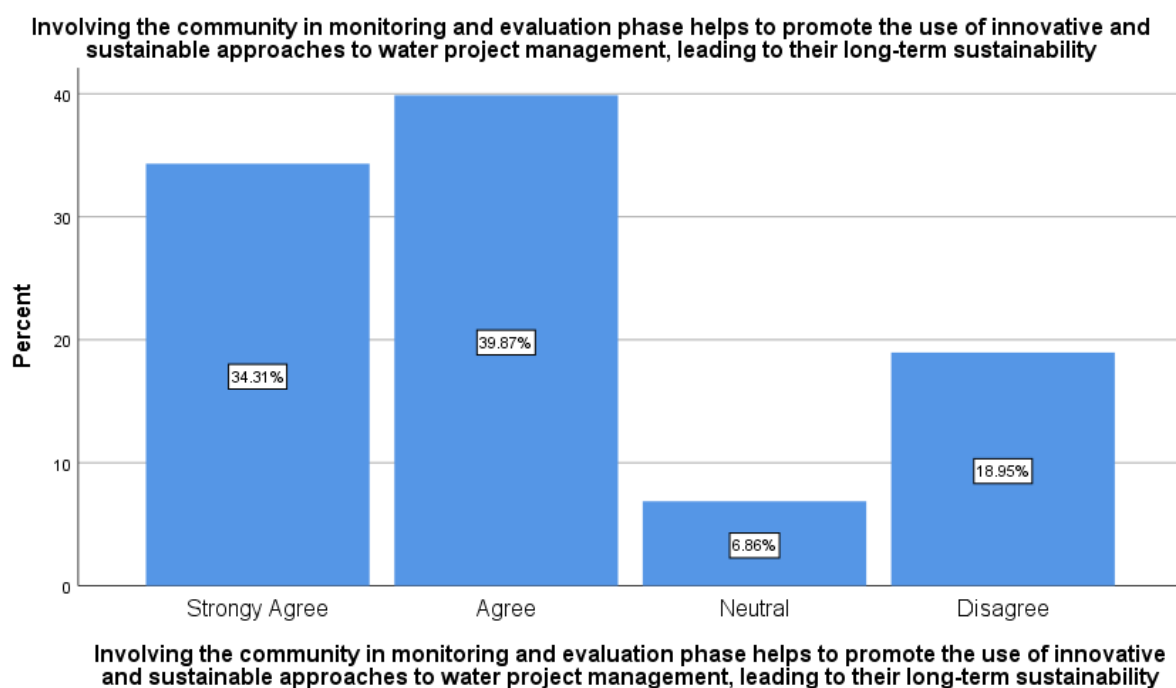


Figure 3:Promotion of the use of innovative and sustainable approaches

On whether involving the community in monitoring and evaluation phase helps to promote the use of innovative and sustainable approaches to water project management, leading to their long-term sustainability, 34.31% selected strongly agree, 39.87% selected agree, 6.86% selected neutral and 18.95% selected disagree. A combined total of 74.18% of the respondents either strongly agree or agree that involving the community in the monitoring and evaluation phase helps to promote the use of innovative and sustainable approaches to water project management, contributing to their long-term sustainability. The majority of participants believe that adopting innovative and sustainable practices can improve water project management through community involvement in monitoring and evaluation. Neutral responses account for 6.86% of the total, suggesting that there is a group of respondents who do not hold a strong opinion on the matter or may not have enough information to make a judgment. A notable percentage (18.95%) of respondents disagreed with the statement, indicating that they do not believe that involving the community in the monitoring and evaluation phase helps to promote the use of innovative and sustainable approaches to water project management, leading to their long-term sustainability. Generally, respondents believe that involving the community in monitoring and evaluation encourages the use of innovative and sustainable water resources project management, ensuring long-term sustainability.

Community involvement in monitoring and evaluation (M&E) phases of water projects is strongly supported by broader literature. A notable 74.18% of respondents either strongly agree or agree that involving the community in M&E supports the adoption of innovative and sustainable approaches to water project management. This sentiment echoes the research by Linkoy (2021) which highlighted that community participation throughout water projects, including their decision-making processes, can be a significant determinant of a project's long-term sustainability. Building trust, transparency, and local knowledge will be enhanced when communities participate in water project development and oversight. Moreover, Panthi and Bhattarai (2008) stressed the value of M&E systems in appraising the effectiveness of water facility projects. Their framework, centered on multiple-criteria decision-making, has demonstrated its worth in providing pivotal insights for various levels of decision-making. As a result of this study, they support their assertion, stating that when communities engage actively in M&E processes, they ensure that projects are on track as well as cultivate an environment conducive to innovative and sustainable practices discovery and use. However, it's also essential to consider the 18.95% of respondents who disagreed with the primary assertion. Their reservations might stem from experiences where community involvement did not necessarily translate to improved project outcomes or where other factors like political influences, lack of technical expertise, or cultural barriers might have overshadowed the benefits of community involvement. A comparison of this study with existing literature shows the importance of community involvement in M&E phases of water projects.

4.1.6 Enhancement of Resilience of Water Projects to Environmental and Economic Changes

Involving the community in monitoring and evaluation phase helps to enhance the resilience of water projects funded by the county government of Kajiado to environmental, and economic changes leading to their long-term sustainability

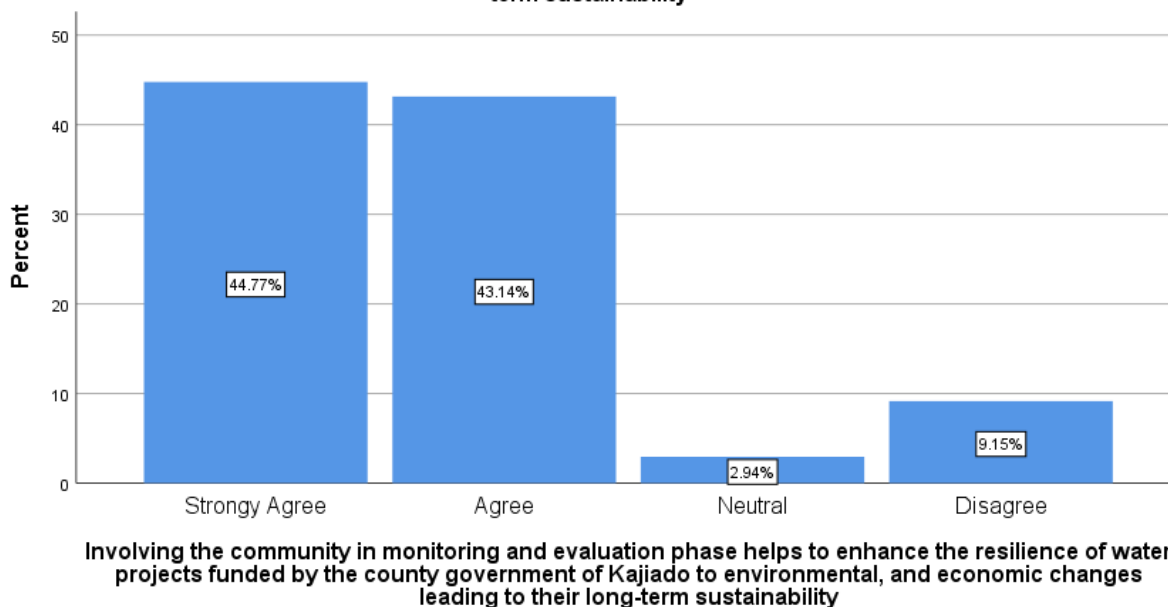


Figure 4: Enhancement of resilience of water projects to environmental, and economic changes

Source, Researcher (2023)

On whether involving the community in monitoring and evaluation phase helps to enhance the resilience of water projects funded by the county government of Kajiado to environmental, and economic changes leading to their long-term sustainability 44.77% selected strongly agree, 43.14% selected agree, 2.94% selected neutral and 9.15% selected disagree. A combined total of 87.91% of the respondents either strongly agree or agree that involving the community in the monitoring and evaluation phase helps to enhance the resilience of water projects funded by the county government of Kajiado to environmental and economic changes, contributing to their long-term sustainability. Accordingly, a significant majority of participants think community involvement in monitoring and evaluation can help water projects adapt and thrive during challenging times. Neutral responses account for 2.94% of the total, suggesting that there is a small group of respondents who do not hold a strong opinion on the matter or may not have enough information to make a judgment. A notable percentage (9.15%) of respondents disagreed with the statement, indicating that they do not believe that involving the community in the monitoring and evaluation phase helps to enhance the resilience of water projects funded by the county government of Kajiado to environmental and economic changes, leading to their long-term sustainability. In summary, a significant majority of respondents believe that involving the community in the monitoring and evaluation phase helps to enhance the resilience of water projects funded by the county government of Kajiado to environmental and economic changes, leading to their long-term sustainability.

Conclusion and Recommendation

The majority of respondents (70.59%) view community involvement in the project planning phase as important for ensuring the longevity of water projects financed by the county government of Kajiado. However, a notable minority disagrees, suggesting that the relationship between community participation and project sustainability is not universally accepted. Involving the community in the project planning phase is believed, by over 82.35%, to have a positive impact on ensuring that water projects funded by the county government of Kajiado are designed to meet the actual needs of the community. This conclusion underscores the importance of community participation in developing projects that effectively address local water needs. With a mean of 1.76 and a Std. of 0.773 the study concluded county government's communication and collaboration with its residents are improved by community involvement during the implementation phase. This suggests that involving the community during the implementation process can enhance cooperation and information exchange between stakeholders, contributing to the success of water projects. A collaborative approach to water project implementation contributes to long-term sustainability by transferring skills and knowledge related to management and maintenance. As a result, community participation in capacity building and empowering local residents with water project management skills is crucial. Most respondents (mean of 1.79 and Std. of 0.633) believe that involving the community in the project implementation phase promotes the use of locally available resources and knowledge, leading to the sustainability of water projects funded by the county government of Kajiado. A successful water project relies on the use of local resources and expertise. Involving the community in the monitoring and evaluation phase promotes the use of innovative and sustainable approaches to water project management, leading to their long-term sustainability. This conclusion emphasizes the importance of community input in driving innovation and sustainable practices in the management of water projects. A community-involved monitoring and evaluation phase increases water project resilience to environmental and economic changes, resulting in long-term sustainability. This finding (87.91%) suggests that community participation during this phase can help water projects adapt to shifting conditions and remain sustainable over time.

From the conclusions it is recommended that during all phases of water projects, community members are encouraged to participate. Participation ensures that the projects meet community needs and preferences, contributing to their sustainability on a whole. It is also recommended that community members should strive to use locally available resources and knowledge in project implementation. Due to its fit within local contexts and understanding, this ensures cost-effectiveness and increases the likelihood of the project's acceptance and sustainability.

References

- Abdisalan, J. A. (2015). The factors influencing the application of participatory monitoring and evaluation in community-based projects: a case of IDPs in Mogadishu Somalia. Retrieved 12 24, 2014, from University of Nairobi Repository.
- Akumu, M., & Onono, P. (2017). Community participation and sustainability of the Kenya comprehensive school health program in Kajiado County, Kenya. A Policy Oriented Research Project Conducted by financial support of the Cooperation and Development Network (CDN).
- Assaf, S. a.-H. (2018). Causes of delay in large construction projects. *International Journal of Project Management*, Vol. 24, pp. 349-357.
- Bakalian, A., & Wakeman, W. (2009). Post-construction support and sustainability in community-managed rural water supply: Case studies in Peru, Bolivia, and Ghana.

- Best K.R (2017). "Disease Campaigns and the Decline of Treatment Advocacy." *Journal of Health Politics, Policy and Law* 42(3):425-457.
- Biwott.T.K. (2020). Influence of community participation on sustainability of county government funded water projects in Elgeyo Marakwet county, Kenya.
- Chess, C. G. (2016). Watersheds are not equal: Exploring the Feasibility of Watershed Management'.*Journal of the American Water Resources Association*37, no. 4.
- Chitere, P. (2015). *Community Development: Its inception and Practice with Emphasis on Africa*, Gideon S. Were Press, Nairobi.
- Cooper, D. R., & Schindler, P. S. (2008). *Business research methods*(10th ed.). New York, NY:McGraw Hill Higher Education.
- Dongol, J. A., Makokha, E. N., & Sakataka, W. (2021). Determinants of community participation in water projects: a survey of water funded projects in Turkana County-Kenya.
- European Union. (2015). Thematic Fiche no. 8 Sustainability II: Ownership and Community Involvement.
- Foster, T. (2013). Predictors of sustainability for community-managed handpumps in sub-Saharan Africa: evidence from Liberia, Sierra Leone, and Uganda. *Environmental science & technology*, 47(21), 12037-12046.
- Githinji, S. N. (2019). *Factors Influencing Sustainability Of Community-based Water Projects In Kajiado County, Kenya: A Case Of Kajiado Central Sub-county* (Doctoral dissertation, University of Nairobi).
- Kativhu, Mazvimavi, Tevera & Nhapi, (2017): *Factors influencing sustainability of communally-managed water facilities in rural areas of Zimbabwe*
- Kwena and Moronge (2015). *Rural Water Sustainability*.
- Larson, S.,and L. J. Williams. (2016). *Monitoring the success of stakeholder participation: Literature Review*'.In *People, communities and economies of the Lake Eyre Basin:DKCRC Research Report 45*, edited by T. G. Measham, B. L. Rake, 251–.
- Linkoy, B. (2021). *Participatory Communication and Sustainability Of Water Projects A Case Of Elangata-Wuas, Kajiado County* (Doctoral dissertation, Daystar University, School of Communication. Nairobi).
- Luhmann, N. (1995). *Social Systems*. Stanford University Press.
- Luhmann, N., Baecker, D., & Gilgen, P. (2013). *Introduction to systems theory* (pp. 50-5900). Cambridge: Polity.
- Machuka, P. M. (2022). *Influence of monitoring and evaluation principles on the sustainability of water supply projects in Kajiado County: a case of Ngong region* (Doctoral dissertation, Africa Nazarene University).
- Malhotra, N. K., & Peterson, M. (2006). *Basic Marketing Research: A Decision-Making Approach*. Hoboken, New Jersey: Prentice Hall.
- Mimrose, D. M. C. S., Gunawardena, E. R. N., & Nayakakorala, H. B. (2011). *Assessment of sustainability of community water supply projects in Kandy District*.
- Mommen et al. (2017): *Does women's participation in water committees affect management and water system performance in rural Vanuatu?*
- Mwanzia, J. S. (2017). *Participatory development in Kenya*.Ashgate: Burlington, VT.
- Ndegwa, P. (2020). *Influence Of Monitoring and Evaluation Process on Implementation of Water, Sanitation and Hygiene Projects in Kenya A Case of UNICEF Program, Kajiado County* (Doctoral dissertation, UoN).
- Newman, I., Lim, J., & Pineda, F. (2013). Content validity using a mixed methods approach: Its application and development through the use of a table of specifications methodology. *Journal of Mixed Methods Research*, 7(3), 243–260. <https://doi.org/10.1177/1558689813476922>
- Noori, H. (2017). *Community participation in sustainability of development projects: a case study of national solidarity program Afghanistan*. *Journal of culture, Society and Development*, 30.
- Nyamongo, D. (2017). *Factors Influencing Implementation of Monitoring and Evaluation in Water Projects in Kenya: A Case of Non-governmental Organisation Water Projects in Kajiado County* (Doctoral dissertation, University of Nairobi).
- Nyatichi, R. (2017). *The influence of community participation on sustainability of community water projects: the case of PCEA water project in Kitengela division Kajiado county*.

Ofuo, A. U. (2011). Effect of community participation on sustainability of rural water projects in Delta Central agricultural zone of Delta State, Nigeria. *Journal of Agricultural Extension and Rural Development*, 3(7), 130-136.

Oino, P. G., Towett, G., Kirui, K. K., & Luvega, C. (2015). The dilemma in sustainability of community-based projects in Kenya.

Olukotun, G. A. (2008). Achieving project sustainability through community participation. *Journal of Social Sciences*, 17(1), 21-29.

Panahi, K., & Bhattarai, S. (2008, August). A framework to assess sustainability of community-based water projects using multi-criteria analysis. In ICCIDC-1 conference (pp. 4-5).

Sheikh, Redzuan, Samah, Magsi & Shahwani, (2016): analysis of farmers participation for water management in sindh province of Pakistan

Silvius, G., SchIPPER, R. O. N., & Planko, J. (2012). Sustainability in project management. Gower Publishing, Ltd..

Singh, A.S. and Masuku, M.B. (2014) Sampling Techniques and Determination of Sample Size in Applied Statistics Research: An Overview. *International Journal of Economics, Commerce and Management*, 2, 1-22.

Spaling, H., Brouwer, G., & Njoka, J. (2014). Factors affecting the sustainability of a community water supply project in Kenya. *Development in Practice*, 24(7), 797-811.

Tapatayia, C. N. (2019). The Effect Of Community Participation On The Performance Of Namelok Water Project In Kajiado County, Kenya (Doctoral dissertation, University of Nairobi).

Walliman, N. (2011). *Research Methods the Basics*. Routledge Publications.

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