



STAKEHOLDER ENGAGEMENT AND PERFORMANCE OF COMMUNITY-BASED WATER, SANITATION, AND HYGIENE PROJECTS IN MAKUENI COUNTY, KENYA

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ABSTRACT

This research examines stakeholder engagement and the performance of community-based WASH projects in the region. The study was guided by the following objectives: to determine the role of donor engagement, and beneficiary participation in the performance of WASH projects in Makueni County. The research was conducted in Makueni County, focusing on WASH projects implemented between 2018 and 2023. The research study utilised a descriptive survey design. This study used a structured questionnaire to obtain primary data from 106 participants. The collected data was cleaned and analysed using SPSS Statistics V22.0 software. Quantitative data analysis used descriptive statistics. Content analysis was used to analyse the qualitative data collected from the open-ended questions. Correlation and regression analysis were used to establish a connection between the variables of interest. Donor engagement and beneficiary participation had significant positive correlations with the performance of WASH projects ($p < .001$). Regression analysis indicated that 75.3% of the variability in the performance of WASH projects could be accounted for by donor engagement and beneficiary participation. Per the regression model, donor engagement ($B = .698$, $t = 3.921$, $p < .001$), beneficiary participation ($B = .366$, $t = 7.957$, $p < .001$), were significant positive predictors of WASH project performance. The study recommends that donors increase their involvement throughout the entire project lifecycle, from planning to execution, to ensure that projects align with the community's evolving needs. Beneficiaries should be provided with engagement forums to give feedback and raise concerns. Additionally, they should receive training to enhance their capacity for involvement in the project, enabling them to sustain WASH initiatives after project completion.

Key Words: Stakeholder Engagement, Performance, Community-Based WASH Projects, Donor Engagement, Beneficiary Participation

Background of the study

Several developing countries around the world have put in place mechanisms to ensure Sustainable Developmental Goal 6 (access to clean water and sanitation is achieved by 2030 (United Nations, 2021). In the past years, the achievement of these goals in the world has been affected by the COVID-19 pandemic, climate change, and conflicts around the world (United Nations, 2022). It is estimated that about 40% of the world's population has water scarcity across all the continents (Mulei & Gachengo, 2021). An increase in drought and desertification further compounds this. The study indicates that continued investments in WASH infrastructure are needed to address the scarcity.

A report (United Nations Development Programme, 2020) states that by 2050, 25% of the population will experience water scarcity worldwide. Water scarcity is also caused by an increase in the world population, which increases the food demand; this, in turn, increases the water capacity required to support agricultural activities, which is the primary user of water supply (Mulei & Gachengo, 2021). According to the United Nations (2022) report, urbanisation and pressure on the energy and industry sectors have increased water demand. By 2020, the global population with access to safe water had increased from 70% to 74%, and those using safe sanitation services had increased from 47% to 54% in five years. Despite the increase, this increased rate indicates that the goal in 2030 will not be achieved unless implementation efforts are increased (United Nations, 2022).

One of the focus areas in the Social Strategy of Kenya Vision 2030 is WASH. The Kenyan government aims to preserve the existing water sources and increase rain and underground water harvesting by 2030 (Vision 2030 report, 2007). According to the Vision 2030 plan, to increase water access and improve sanitation, the government of Kenya aims to construct new dams. Kenya is working towards access to WASH for its population by 2030, as evidenced through SDG and Vision 2030, but there is more that needs to be done to work towards this achievement. To ensure the availability and sustainable management of WASH globally, regionally, and even locally, different organisations must work together to successfully implement different projects to achieve sustained services in Water Sanitation and Health (WASH) for generations (Tsinda & Abbott, 2018).

Access to WASH is an essential requirement that should be available to all individuals. This includes providing uncontaminated water, suitable sanitation infrastructure, and promoting effective hygiene practices (Gizaw & Addisu, 2020). More than 1.1 billion individuals across the globe engage in open defecation, while approximately 1 in 10 people worldwide do not have access to improved or sanitary drinking water sources. This can be attributed to the scarcity or insufficient access to clean water and basic sanitation amenities (Qamar et al., 2022). Ensuring uncontaminated drinking water, adequate sanitation facilities, and promoting individual cleanliness are crucial to attaining development objectives that contribute to establishing a sustainable global environment. According to Atangana and Oberholster (2022), the inclusion of these items could potentially result in a decrease in child mortality rates. The UNICEF-initiated WASH program aims to improve safe drinking water and basic sanitation for individuals lacking access to these essential resources.

Statement of the Problem

The problem is that despite substantial investments in Water Sanitation and Health (WASH) projects in Kenya, particularly in Makueni County, by the government and donor agencies, these projects have faced significant implementation challenges. These include project delivery delays, failure to meet quality standards, and budget overruns. Previous research shows that although several WASH projects have been implemented in both urban and Arid and Semi-Arid Land (ASAL) regions, their outcomes have not met expectations (Musau, Bwisa, &

Kihoro, 2018). The Kenyan government via the Water Resources Authority has allocated over KES 30 billion has been allocated to WASH initiatives nationally over the past five years (Ogolla & Mumba, 2024). However, a review by Mithika and Moronge (2017) revealed that over 40% of WASH projects experienced delays, and nearly 30% failed to meet basic quality standards or were never completed. In Makueni County specifically, only 35.7% of households have access to improved water sources with only the Athi River and Kibwezi River being permanent river sources of water in the entire county (NEMA, 2025). There is a significant delivery gap as the average distance to a water point within the county is 8 kilometres (NEMA, 2025). Improving the performance of WASH projects in Makueni County could help improve access to water resources among residents of this county.

Stakeholder engagement has been identified as a key factor in improving project performance (Magassouba et al., 2019), yet its role in the success of WASH projects has not been fully explored, especially in the local context of Makueni County. Magassouba et al. (2019) found that projects with active stakeholder participation were 37% more likely to meet performance targets than those with limited engagement. Similarly, Musau (2020) reported that involving beneficiaries and local actors in decision-making processes significantly increased project acceptability and sustainability. While prior studies show that increasing the involvement of stakeholders positively influences project success (Musau, 2020), there remains a lack of clarity regarding the roles and responsibilities of various stakeholders, such as project leaders, teams, donors, and beneficiaries. This knowledge gap leads to miscommunication, overlapping efforts, and inefficiencies, which ultimately hinder project performance and delay the achievement of desired health and sanitation outcomes. The lack of structured stakeholder engagement from the onset, including defining roles, managing expectations, and ensuring effective communication, is a key factor contributing to project failure. Therefore, this study aims to investigate how stakeholder engagement influences the success of community-based WASH projects in Makueni County, focusing on the roles of the project donors, and beneficiaries, and how their involvement affects project performance, including beneficiary acceptability, timely project completion, and increased access to WASH services.

Research Objectives

General Objective

The research seeks to examine the influence of stakeholder engagement on the performance of community-based water sanitation and health projects in Makueni County.

Specific Objectives

- i. To determine the influence of donor engagement in the performance of community-based water, sanitation, and health projects in Makueni County.
- ii. To assess the influence of beneficiary participation in the performance of community-based water, sanitation, and health projects in Makueni County.

LITERATURE REVIEW

Theoretical framework

Resource-based View Theory

Resource-based view theory was proposed by Edith Penrose in 1959 and was improved by scholars including Jay B. Barney. According to Barney's Resource-Based View (RBV) theory in 1991, an organisation's resources consist of financial, natural, capital, and intangible assets. The theory posits that if a firm possesses resources that are both rare and valuable, as well as challenging to imitate or replace, it has the potential to achieve a competitive advantage. Supporters of the RBV theory emphasise the importance of optimising the utilization of

existing funds in new ventures rather than acquiring additional resources (Alvarez & Barney, 2017). An organisation's resources can be classified into two main categories: intangible assets and tangible assets. Intangible assets encompass various elements such as intellectual property, brand reputation, patents, and trademarks. Tangible resources include constructions, land, capital, and equipment.

Nason and Wiklund, (2018) argue that the ownership of unique capabilities and resources plays a significant role in determining the varying performance levels among different companies. For instance, companies can gain significant market advantage from funds with a complex and extended learning curve, posing challenges for easy transferability. The RBV theory explains differences in performance based on efficiency, as stated by Hoskisson, Gambeta, Green, and Li (2018). Performance variations are believed to arise from resources with inherently different levels of effectiveness. This means that a company can provide clients with more significant benefits while maintaining the same or lower profit level.

The RBV theory applies to this research as it facilitates the assessment of the study's objective on donor engagement. The presence of donors in a project allows an organisation to evaluate the effectiveness, efficiency, and impact of its operations. Moreover, acquiring and allocating appropriate resources to facilitate stakeholder capacity development also impacts operational effectiveness. It is important to mention the significance of stakeholders in managing resources as a vital resource or asset for an organisation or project. Thus, the theory served as the foundation for incorporating the variables of stakeholder capacity in this study.

Participation Theory

Sherry Arnstein is a notable figure in the realm of citizen participation in governance. One of her most significant contributions is the development of a model known as "A Ladder of Citizen Participation" in her 1969 article. This model categorizes various levels of citizen involvement in decision-making processes, ranging from non-participation to tokenism, and ultimately to full citizen control. Arnstein's work has had a profound impact on the understanding of citizen engagement in public policy, shedding light on how power dynamics can influence individuals' capacity to genuinely influence decision-making processes.

A ladder of citizen participation is a conceptual framework that outlines the different levels of involvement that citizens can have in decision-making processes. The ladder typically consists of rungs representing various levels of participation, ranging from low to high levels of engagement. At the bottom of the ladder are levels such as "informing" and "consultation," where citizens are provided with information or asked for feedback. Moving up the ladder, levels like "collaboration" and "empowerment" involve more active participation from citizens, including working together with decision-makers to co-create solutions or having decision-making power. This ladder serves as a tool for evaluating and improving the quality of citizen engagement in governance and decision-making processes.

The research is additionally backed by participatory theory (PT), which emphasises the complete engagement of communities and all relevant parties in creating content, implementing programs, and developing policies (Arnstein, 1969; Chambers, 1994). This approach has resulted in significant improvements in the lives of these communities. Armenia et al., (2019) observed that sustainability encompasses the standards for appropriate resource utilisation in projects funded by donors and the assessment of outcomes in terms of their social, economic, and environmental impacts. Furthermore, according to Reed et al. (2018), the theory suggests that communities are responsible for shaping and altering the future. Therefore, community involvement in decision-making is necessary to implement changes and address community issues effectively.

Additionally, the theory suggests the importance of acknowledging the abilities, contributions, and endeavours of communities, as their involvement enhances the likelihood of a sustainable project (Rezaei, 2021). Participation Theory is based on six fundamental principles or concepts that contribute to its effectiveness in achieving inclusive and successful outcomes in high-level projects. The principles include equality among partners or collaborators, transparency to promote openness in project activities and communication, power sharing to ensure balanced authority among stakeholders, shared responsibilities in project tasks, and empowerment and cooperation. These principles are utilised in all projects by promoting collaboration and involving all stakeholders, which ultimately contributes to the success and long-term viability of the projects. The stakeholders in a project include donors, staff, managers, and communities. Their ability to collaborate improves their skills and competencies, ultimately contributing to the success of sustainable projects (Rezaei, 2021).

This theory is highly relevant to this study because stakeholder engagement is crucial for educating communities about project maintenance, effectively managing disagreements, and fostering collaboration (Rezaei, 2021). When individuals from the community, both from within and outside the project, are actively involved in implementing, maintaining, and planning donor-funded projects, it significantly enhances the likelihood of achieving long-term sustainability. The theory underscores that such inclusive practices lead to more substantial, more resilient projects better positioned to deliver sustainable outcomes. As community members participate in the decision-making processes, their commitment to maintaining and supporting the project grows, enhancing the project's long-term viability. Thus, this theory will anchor the role of beneficiary participation in this study, highlighting its importance in fostering sustainable development and ensuring that projects deliver lasting benefits to the communities they serve.

Conceptual framework

In the conceptual framework below, the independent variables considered are donor engagement, project manager, project team, and beneficiary participation, whereas the independent variable will be the performance of WASH projects.

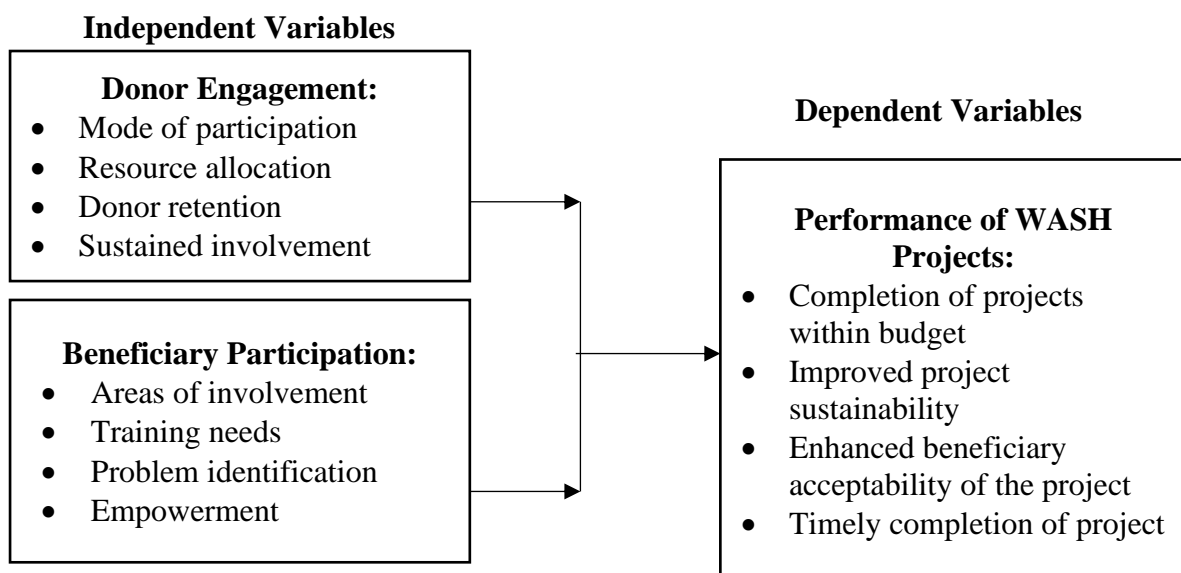


Figure 2.1: Conceptual Framework

Performance of WASH Projects

The performance of Water, Sanitation, and Hygiene (WASH) projects is a multifaceted concept encompassing the effectiveness, efficiency, and sustainability of interventions to improve

access to clean water, adequate sanitation, and proper hygiene practices (McMichael, 2019). Performance measurement involves assessing whether the project objectives are met within the allocated time and budget while delivering the intended health and social benefits to the target community. Key indicators of performance include the quality and reliability of water supply, the adequacy and accessibility of sanitation facilities, and the level of adoption of hygiene practices among the community members. Effective performance also considers the inclusivity and equity of services provided, ensuring that vulnerable and marginalised groups access WASH resources equally (Kwami et al., 2019).

In Makueni County, the performance of WASH projects is critical to addressing the region's specific challenges, such as water scarcity, poor sanitation infrastructure, and prevalent hygiene-related health issues. Several measures are used to assess the performance of these projects. One key measure is the completion of the project within budget, ensuring that financial resources are used efficiently without cost overruns. Another important measure is the timely completion of the project, which indicates effective project management and adherence to schedules (Kwami et al., 2019). Improved project sustainability is also crucial, reflecting the long-term viability and maintenance of the WASH infrastructure. Enhanced beneficiary acceptability of the project is another critical performance indicator, demonstrating that the project meets the needs and expectations of the community, leading to higher adoption rates and better outcomes. High-performing WASH projects contribute significantly to public health, enhance the community's socio-economic status, and create a foundation for long-term health, development, and resilience in Makueni County.

Donor Engagement

In a project, internal and external stakeholders are influenced or impacted by the outcome of the project. Donor engagement is a critical aspect of successfully implementing and performing community-based projects, particularly in sectors such as Water, Sanitation, and Hygiene (WASH). Effective donor engagement involves establishing and maintaining strong relationships between donors and the community-based organisations (CBOs) that execute these projects (Niederberger & Glanville-Wallis, 2019). Donors provide the financial resources necessary for project initiation and continuation and offer technical expertise, strategic guidance, and capacity-building support. Their involvement extends beyond funding to actively participating in project planning, monitoring, and evaluation processes. This comprehensive engagement ensures that projects align with the donors' objectives and the community's needs, fostering a collaborative environment where shared goals are prioritised (Ndungu & Karugu, 2019).

Moreover, robust donor engagement enhances transparency and accountability within the project lifecycle. When donors are actively involved, there is a higher level of scrutiny and oversight, which helps identify and mitigate risks early on (Ndungu & Karugu, 2019). This engagement fosters a culture of continuous improvement, as feedback mechanisms are established to learn from past experiences and apply lessons to future initiatives. In the context of community-based WASH projects in Makueni County, donor engagement is particularly vital due to the region's specific challenges, such as water scarcity, inadequate sanitation facilities, and health-related issues. By engaging with donors, CBOs can access innovative solutions, leverage advanced technologies, and implement best practices tailored to the local context, ultimately enhancing the effectiveness and sustainability of WASH projects.

Beneficiary Participation

The active involvement of beneficiaries is crucial for the success of community-based projects. This concept involves the active participation of community members who directly benefit from the project in different stages of the project lifecycle, such as planning, implementation, monitoring, and evaluation (Hasan et al., 2018). By involving beneficiaries, their needs,

preferences, and insights can be incorporated into the project design, resulting in interventions that are more relevant and effective. By engaging with the people who will benefit from the project, those in charge of implementation can tap into valuable local insights and cultural traditions (Arifa, 2019). This is crucial for creating WASH solutions that are both long-lasting and well-received.

When community members are actively involved, they cultivate a sense of ownership and responsibility towards the project (Arifa, 2019). This sense of ownership motivates individuals to diligently maintain and preserve the facilities and practices introduced, thereby ensuring the long-term sustainability and upkeep of WASH infrastructure. In addition, actively participating in the project fosters trust between the project team and the community, making implementation smoother and reducing resistance to change. Beneficiaries play a crucial role in offering valuable feedback and insights throughout the project, which allows for timely adjustments and improvements to be made.

Empirical review

Donor engagement and project performance

Heinrich-Fernande (2019) conceptualizes donor engagement as an integrative approach that combines conventional and contemporary strategies to develop innovative financing mechanisms, empowering donors to allocate resources to initiatives aligned with their priorities. Donors can actively participate in project management by assuming roles beyond financial contributions. Through collaborative goal setting, donors can align their expectations with project objectives, fostering a sense of shared purpose. Serving as advisors, they contribute their expertise, offering valuable insights into project strategies, implementation methods, and potential challenges. Additionally, donors can participate in regular progress reviews, providing feedback and guidance to ensure the project stays on track. This collaborative engagement enhances project outcomes and establishes a more profound sense of involvement and ownership, ultimately leading to more impactful and sustainable initiatives.

Gachui (2017) assessed the effects of donor funding on community development success within Kenya on water projects funded by donors in Embu County. The research's objective was to investigate the influence of training, development, and stakeholder involvement on the success of community development projects. A sample of three hundred and thirty respondents was selected using a two-stage sampling procedure. Multiple regression analysis of the data indicated that all independent variables significantly affected community development projects' success.

According to Maqbool et al., (2019), fundraising efficiency refers to acquiring funds to ensure the survival of non-governmental organisations (NGOs). The allocation of funds to a project directly impacts the quality of its outcome. The donor-dependency ratio is a metric that can be used to measure fundraising efficiency (Epstein & McFarlan, 2018). According to Maqbool et al., (2019), the resource generation ratio can serve as an additional metric for assessing the effectiveness of fundraising efforts. The response rate of funding proposals and the associated funding costs are both metrics utilized to assess the efficiency of fundraising efforts. While fundraising efficiency is widely acknowledged as a prominent metric for assessing the financial performance of non-governmental organizations (NGOs), it is important to acknowledge the existence of alternative measures that merit consideration. These measures are associated with the financial transparency of non-governmental organizations (NGOs) providing relevant stakeholders with access to information regarding its financial activities. Financial transparency encompasses the act of providing financial reports to donors, ensuring that these reports are accurate, timely, and comprehensive.

Donors establish various regulations that govern the complete allocation of funds to recipients. It also establishes the criteria for holding previously distributed funds accountable before releasing additional instalments to Project Implementation Units (PIUs). The process is thorough and requires a significant amount of time. Additionally, the borrower must comply with all rules and regulations regarding the distribution of funds. Failure to do so may result in the suspension of financial assistance. According to Odedekun (2019), the allocation of aid commitments is often influenced by political processes and pressures, resulting in the disbursement of aid being made prematurely rather than delayed. Political motivations have resulted in the allocation of an excessive amount of funds even prior to the fulfilment of conditional requirements. The country providing the loan may have a personal interest in how the funds are distributed, which may not align with the recipient country's best interests. According to Ndaruhutse and Brannelley (2018), there is a possibility of limited absorption capacity of current funds, leading to a slower disbursement rate than initially anticipated. Donors frequently express concerns about the absorption capacity of Project Implementation Units (PIUs), which could be attributed to inadequate procurement systems in the recipient nation.

Beneficiary participation and project performance

Beneficiary participation is a fundamental aspect of inclusive development, involving the active engagement of individuals or communities who are expected to benefit from a project in its various stages, including planning, implementation, and evaluation (Costa & Andreus, 2021). This cooperative method recognizes beneficiaries as stakeholders who possess valuable knowledge about their own needs, preferences, and local circumstances. Beneficiaries can engage in various forms of participation, such as participatory workshops, focus group discussions, and community meetings (Rodríguez-Rivero et al., 2020). In these settings, they can contribute their ideas, express their concerns, and collaborate in the development of project strategies. They can be involved in making decisions, allocating resources, and monitoring, which helps them feel a sense of ownership and control. This not only improves the relevance and effectiveness of the project but also leads to sustainable and appropriate outcomes.

Khwaja (2017) conducted a study to evaluate the influence of beneficiary participation on projects in Northern Pakistan. He discovered that community involvement does not always yield positive outcomes. He discovered that it had worth in non-technical matters but lacked usefulness in technical subjects. He discovered that when beneficiaries were involved, especially through providing cash or in-kind contributions, it resulted in the development of projects that were able to be sustained over time.

The case study conducted by Balozi and Gabissa (2018) focused on the impact of beneficiary involvement on the long-term viability of water projects in the Arusha region, which were financially supported by donors. The research utilized regression analysis and correlations to examine a dataset consisting of 309 respondents who were beneficiaries of projects funded by donors. The research discovered that the active participation of beneficiaries has a beneficial impact on the long-term viability of projects that are financed by donors.

In their study, Mundau and Tanga (2016) examined the extent of community involvement and the degree to which decision-making processes were localized in foreign projects funded by donors in Zimbabwe. In addition, the study paper utilized participatory approaches as its theoretical framework. In addition, data was collected directly from 52 project members belonging to two non-governmental organizations (NGOs) in Chiredzi District, a region situated in the south-eastern low veld of Zimbabwe. The selection of these NGOs was done randomly. Moreover, the findings indicated that the level of project members' engagement throughout the project cycle has an impact on the decision-making process.

Migwi and Atikiya (2017) conducted a study to investigate the effects of community involvement at various stages of project implementation and the long-term viability of these projects. Data was gathered from a group of 200 individuals who were actively involved in community-sponsored initiatives at JKUAT, this represented a ratio of 10% in relation to the total population. A case research design was utilized. Consequently, primary data was obtained using self-administered questionnaires, and secondary data from various sources including annual reports, working papers, books, journals, research studies, dissertations, theses, articles, and online resources. The research found that there was insufficient community involvement throughout the different phases of project development. Furthermore, in the early phases of the planning process, the participants exhibited minimal engagement, with a majority expressing dissent towards including the community in the identification of community-based projects. During the implementation phase, there was a notable disagreement among the participants regarding the level of community involvement in coordinating the project activities. The findings of the study revealed a deficiency in community engagement during the monitoring and evaluation (M&E) stage. Most participants disagreed with the idea of including communities in the evaluation teams.

Osman (2018) performed research that investigated the influence of community engagement on the long-term viability of non-governmental organizations (NGOs) in Kenya, with a special emphasis on the Shining Hope for Community organization. Furthermore, the study goals included an investigation of the influence of project planning, labour contributions, capacity building, and communication on the long-term viability of development initiatives. The research study used descriptive research methodologies, specifically using questionnaires and interview guides as data collection tools. The research finally concluded that there was a favourable association between the level of community engagement and the long-term viability of initiatives.

RESEARCH METHODOLOGY

In this study, a descriptive research design was adopted. Descriptive research design aims at describing characteristics or behaviours of a particular phenomenon, group, or situation (Abutabenjeh, & Jaradat, 2018). The target population for this study includes water projects that have been completed in the last five years across six sub-counties in Makueni, as indicated in Table 3.1 below. The unit of analysis consists of 59 completed water projects in Makueni County. The study focused on two groups: project team members (59) and community representatives (59), as highlighted in previous research (Tanathi, 2018; Atangana & Oberholster, 2022). The project team members included project managers and other team members, ensuring a diverse group to minimize bias. In total, the study targeted 118 respondents: 59 project team members and 59 community representatives from WASH projects currently being implemented in the six sub-counties of Makueni County. Both project team members and community representatives play crucial roles in the planning, implementation, and monitoring of WASH projects. They possess valuable firsthand experience and insights into the dynamics, challenges, and successes of these projects.

Sampling is the process of selecting some items from a given population for observation and study. It is beneficial when the entire population cannot be examined due to time, energy, and cost constraints, especially in large fields of study (Kothari, 2004). However, a census was conducted for this study because the population was close to 100, allowing the researcher to observe every individual without facing limitations in time, energy, or costs. Conducting a census enhanced the accuracy of the findings, as all elements in the study were included in the observation. Thus, all members of the target population that were available for data collection were included in the sample.

Table 1: Target Population by Category

Respondents	Number
Project Team members	59
Community Leaders	59
Total	118

In this study structured questionnaire was adopted to obtain primary data. A questionnaire is considered appropriate for this research because it ensures the anonymity of the participants. The gathered data was cleaned and analysed using SPSS version 22. Quantitative data analysis used descriptive statistics such as frequencies, percentages, means and standard deviation (the central measures of tendencies) to summarize the data. Content analysis was used to analyse the qualitative data collected from the open-ended questions. Correlation and regression analysis were used to establish a connection between the variables of interest.

RESEARCH FINDINGS, ANALYSIS AND DISCUSSIONS

The study targeted 118 respondents, representatives from WASH projects currently being implemented in six sub-counties in Makueni County. Out of the targeted respondents, 106 questionnaires were properly filled and submitted. This represented a response rate of 89.8% which was sufficient to inform this study. According to Mugenda and Mugenda (2012), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

Descriptive Statistics

This section provides descriptive statistics results in the form of means and standard deviations. The research results were interpreted using two measures of central tendency: the mean (M) and standard deviation (SD), while percentages (%) were utilized to show the frequency of Likert scores for each item. Kothari and Garg (2014) assert that the mean is the most used measure of central tendency, with standard deviation being a widely accepted and satisfactory measure of dispersion in research studies. The study employed a 5-point Likert scale, meaning that a score of 3 corresponds to a 50% score. A low standard deviation indicates that data points are close to the mean, while a high standard deviation signifies that they are more dispersed from the mean. The results are presented in line with the study variables.

Performance of WASH projects

The dependent variable for the study was the performance of WASH projects in Makueni County. The participants were asked to express their degree of agreement on comments about the performance of WASH projects. The results are shown in Table 1 below.

Table 1: Performance of WASH Projects

Performance of WASH projects	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std Dev
Stakeholder engagement has ensured the resources for the WASH project were managed efficiently.	0	9(8.5%)	17(16%)	57(53.8%)	23(21.7%)	3.887	.8431
Stakeholder engagement has led to projects being completed within the budget	1(0.9%)	2(1.9%)	25(23.6%)	24(22.6%)	54(50.9%)	4.208	.9332
Stakeholder engagement has improved project sustainability of WASH projects in Makueni county	2(1.9%)	2(1.9%)	23(21.7%)	21(19.8%)	58(54.7%)	4.236	.9813
Stakeholder engagement has enhanced beneficiary acceptability of WASH projects in Makueni county	0	0	17(16.0%)	56(52.8%)	33(31.1%)	4.151	.6732
The community has shown high levels of acceptance and satisfaction with the WASH facilities provided.	0	4(3.8%)	6(5.7%)	35(33%)	61(57.5%)	4.330	.7267
Stakeholder engagement has helped ensure timely completion of WASH projects in Makueni county	0	0	16(15.1%)	39(36.8%)	51(48.1%)	4.443	.7938

The study findings indicate that the involvement of stakeholders significantly enhanced the efficient management of resources for the WASH project, with a mean score of 3.887 and a standard deviation of 0.8431. Notably, 80% of respondents agreed with this finding. Additionally, stakeholder participation contributed to the projects being completed within budget, indicated by a mean score of 4.208 and a standard deviation of 0.9332. Respondents recognized that stakeholder engagement had a positive impact on the sustainability of WASH projects in Makueni County, with a mean score of 4.236 and 79% of respondents agreed, while 25% disagreed. Furthermore, there was a high level of beneficiary acceptance and satisfaction regarding the WASH facilities, reflected in a mean score of 4.330 and a standard deviation of 0.7267. Most respondents also acknowledged that stakeholder engagement played a crucial role in ensuring the timely completion of WASH projects, evidenced by a mean score of 4.443 and a standard deviation of 0.7938. Lastly, a considerable number of respondents agreed that stakeholder engagement had enhanced the acceptability of WASH projects among beneficiaries in Makueni County, with a mean score of 4.151 and a standard deviation of 0.6732.

Donor engagement and project performance

The primary objective of this study was to examine the influence of donor engagement on the performance of community-based Water, Sanitation, and Health (WASH) projects in Makueni County. To gather relevant data, respondents were asked to express their level of agreement with a series of statements regarding donor involvement. The findings are encapsulated in Table 3.

Table 3: Donor Engagement and Project Performance

Donor engagement	SD F (%)	D F (%)	N F (%)	A F (%)	SA F (%)	Mean	Std Dev
Donors actively participate in the project planning process	0	2(1.9%)	32(30.2%)	16(15.1%)	56(52.8%)	4.132	.6665
Donors clearly communicate their expectations for the project	2(1.9%)	2(1.9%)	21(19.8%)	16(15.1%)	65(61.3%)	3.887	.9372
Donors provide timely funding for the project	0	0	58(54.7%)	18(17%)	30(28.3%)	3.708	.9812
The financial oversight provided by donors helps in minimizing cost overruns	0	8(7.5%)	8(7.5%)	31(29.2%)	59(55.7%)	3.930	.7271
Donors have repeatedly funded multiple water and sanitation projects in the county	0	0	17(16%)	42(39.6%)	47(44.3%)	4.302	.9126
Donors have maintained good donor relations with the project leader and the project team members for future funding opportunities	0	4(3.8%)	28(26.4%)	27(25.5%)	47(44.3%)	4.108	.9251

A substantial majority of respondents indicated a consensus that donors have consistently financed multiple water and sanitation initiatives within the county, evidenced by a mean score of 4.302 (SD = .9126). Furthermore, respondents affirmed that donors play a proactive role in the project planning process, with a mean score of 4.132 (SD = .6665). It was also noted that donors have successfully maintained positive relationships with project leaders and team members, facilitating future funding opportunities, as reflected in a mean score of 4.108 (SD = .9251). In addition, a significant number of respondents acknowledged the importance of financial oversight provided by donors in minimizing cost overruns, yielding a mean score of 3.930 (SD = .7271). Respondents also recognized that donors effectively communicate their expectations for project outcomes, indicated by a mean score of 3.887 (SD = .9372). However, slightly lower agreement was observed regarding the timeliness of donor funding, which received a mean score of 3.708 (SD = .9812).

Respondents further elaborated on how donor engagement influences the performance of WASH projects in Makueni County. It was reported that donor engagement significantly enhances project performance by offering essential financial support, technical expertise, and strategic guidance. Active involvement from donors often results in well-funded projects, thereby facilitating access to high-quality resources, skilled labour, and requisite technology that might otherwise be inaccessible. Additionally, donors contribute valuable experience drawn from similar initiatives in other regions, thereby imparting best practices and innovative solutions to local challenges. This multifaceted support tends to enhance project planning, monitoring, and evaluation, which are critical components in achieving desired outcomes effectively and efficiently. Donors also play a pivotal role in fostering accountability and transparency, contributing to the prudent management of funds and helping to build trust among communities, government entities, and other stakeholders. Such dynamics cultivate a collaborative environment that is vital for the long-term sustainability and success of WASH initiatives.

Beneficiary participation and project performance

The second objective of this study was to evaluate the role of beneficiary participation in the performance of community-based Water, Sanitation, and Health (WASH) projects within

Makueni County. Respondents were asked to express their level of agreement with several statements related to beneficiary engagement, and their responses are documented in Table 4.

Table 4: Beneficiary Participation and Project Performance

Beneficiary participation	SD	D	N	A	SA	Mean	Std
	F (%)	F (%)	F (%)	F (%)	F (%)		Dev
Beneficiaries are actively involved in the planning and decision-making processes of WASH projects in Makueni county.	0	15(14.2%)	10(9.4%)	57(53.8%)	24(22.6%)	3.849	.9339
Beneficiaries have opportunities to provide feedback and suggestions throughout the project implementation.	4(3.8%)	5(4.7%)	18(17%)	24(22.6%)	55(51.9%)	4.142	1.0993
Beneficiaries receive appropriate training to participate effectively in project-related activities.	4(3.8%)	5(4.7%)	34(32.1%)	14(13.2%)	49(46.2%)	3.934	1.1487
Continuous training opportunities are offered to empower beneficiaries in contributing to project success.	2(1.9%)	2(1.9%)	16(15.1%)	21(19.8%)	65(61.3%)	4.189	.7447
Beneficiaries actively participate in identifying their WASH needs and priorities.	3(2.8%)	5(4.7%)	18(17%)	25(23.6%)	55(51.9%)	4.245	.9741
Beneficiaries' input plays a significant role in shaping the design and implementation of WASH projects.	5(4.7%)	7(6.6%)	20(18.9%)	36(34%)	38(35.8%)	4.113	.7846

Findings revealed that a significant majority of respondents agreed that beneficiaries actively participate in identifying their WASH needs and priorities, as evidenced by a mean score of 4.245 (SD = .9741). Additionally, respondents acknowledged the provision of continuous training opportunities designed to empower beneficiaries to contribute effectively to project success, with a mean score of 4.189 (SD = .7447). Furthermore, the data indicated that beneficiaries have opportunities to provide ongoing feedback and suggestions throughout project implementation (Mean = 4.142, SD = 1.0993) and that their input is pivotal in shaping both the design and execution of WASH projects (Mean = 4.113, SD = .7846).

While a subset of respondents concurred, that beneficiaries receive appropriate training to engage effectively in project-related activities (Mean = 3.934, SD = 1.1487), fewer participants agreed that beneficiaries were actively involved in the planning and decision-making processes of WASH initiatives in Makueni County (Mean = 3.849, SD = .9339).

Respondents were also prompted to elucidate the impact of beneficiary participation on the performance of WASH projects in Makueni County. The overarching sentiment expressed was that beneficiary participation is essential to the efficacy of these projects, fostering a sense of ownership and accountability among community members. Active involvement in planning, decision-making, and implementation cultivates a commitment to support and maintain WASH facilities, thereby enhancing the sustainability of the projects. The inclusion of beneficiaries' insights ensures that initiatives are tailored to local needs and cultural contexts, which enhances their relevance and effectiveness.

Moreover, community engagement is instrumental in identifying potential challenges early in the process, thereby allowing for proactive measures that mitigate delays and enhance overall operational efficiency. Providing beneficiaries with a voice contributes to building trust and

transparency, while simultaneously empowering the community, culminating in higher satisfaction levels and the long-term success of WASH initiatives.

Correlation Analysis

This study also aimed to determine how the independent variables affecting the performance of WASH projects were correlated. This was executed using the Pearson correlation at a 0.05 significance level. Table 5 shows the correlation of the variables.

Table 5: Correlation Analysis

		Performance of WASH Projects	Donor engagement	Beneficiary participation
Performance of WASH projects	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	106		
Donor engagement	Pearson Correlation	.854*	1	
	Sig. (2-tailed)	.000		
	N	106	106	
Beneficiary participation	Pearson Correlation	.736*	.000	1
	Sig. (2-tailed)		.000	
	N	106	106	106

According to Wong and Hiew (2005), a correlation coefficient value (r) falling within the range of 0.10 to 0.29 is considered poor, a value between 0.30 and 0.49 is considered medium, and a value between 0.50 and 1.0 is considered high. Thus, based on Table 5 above, all the independent variables had a positive correlation or relationship with the dependent variable with donor engagement having the highest correlation of (r=0.854) followed beneficiary participation with a correlation of (r=0.736). This implies that all the variables are statistically significant at the 95% confidence interval.

Regression Analysis

This sub-section provides regression results that establish the role of stakeholder engagement in the performance of community-based Water Sanitation and Health projects in Makueni County

Table 6: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. error	B		
Constant	.842	2.262	.292	.372	.711
Donor engagement	.698	.178	.465	3.921	.000
Beneficiary participation	.366	.046	.819	7.957	.000

1

From the findings, the established equation becomes:

$$Y = 0.842 + 0.698 X_1 + 0.366X_2 + \varepsilon$$

Where: - Y= project performance, X₁ = Donor engagement, X₂ = Beneficiary participation

According to the model, when all factors remain constant, the performance of WASH projects would be at 0.842 units. Increasing Donor engagement by one unit would result in a performance increase of 0.698 units.. Beneficiary participation has a smaller impact, with a

unit change affecting performance by 0.366 units. Donor engagement ($B=.698$, $t=3.921$, $p<.001$), beneficiary participation ($B=.366$, $t=7.957$, $p<.001$) were all significant positive predictors of project performance

Summary of Major Findings

This section provides a summary of the major findings based on the objectives.

Role of donor engagement on the performance of community-based Water, Sanitation and Health projects in Makueni County

The results demonstrate that donors are vital to the success of WASH projects in Makueni County by providing necessary technical expertise and guidance as required. Respondents noted that donors engage in project planning and decision-making processes, promoting collaboration with the community and project team during the project lifecycle. Donors establish objectives that correspond with the community's varied needs, thereby ensuring that projects continue to be pertinent and advantageous to local priorities. Furthermore, the financial supervision offered by donors helps in minimising waste and averting cost overruns, thereby encouraging the efficient utilisation of resources. Donors are recognized for effectively conveying their expectations and requirements. Although funding is typically timely and sufficient, it is crucial for the completion and sustainability of projects.

The results for donor engagement show a high positive correlation with the dependent variable, with a correlation coefficient of 0.854. This indicates a strong relationship between donor engagement and the success of the WASH projects, though it is slightly lower compared to the other independent variables. The correlation suggests that donor involvement, while still significant, may have a somewhat lesser impact than factors such as beneficiary participation, project team, and project leader, but it remains statistically significant at the 95% confidence interval. Increasing Donor engagement by one unit would result in a performance increase of 0.698 units. This means that for every one-unit increase in donor engagement, the performance of the WASH project is expected to increase by 0.698 units. It suggests a strong positive effect, indicating that greater involvement and support from donors can lead to noticeable improvements in the project's performance.

Donors should engage in a more participatory approach, focusing on engaging local stakeholders more frequently and more meaningfully during all project phases. For instance, donor organizations can better engage the community and local leaders by holding more consultations, elevating participation throughout the project cycle, and allowing for better reflection of community needs and priorities in their projects. As a part of this approach, donors must be flexible and responsive to suggestions and feedback from local actors and changing community needs.

It is critical to ensure that local partnerships and governance can manage programs after a donor is no longer funding the project. This kind of governance structure would require equipping local actors with the necessary skills and resources to effectively engage and feel a sense of ownership to pursue the interventions beyond the donor's role. The need to build local government and community capacity within local actors is key for successful WASH interventions to remain viable in the future (Mekonnen et al., 2022).

Role of beneficiary participation in the performance of community-based Water, Sanitation and Health projects in Makueni County

The results demonstrate that the participation of beneficiaries significantly improves the effectiveness of WASH projects in Makueni County by promoting active engagement in recognizing local WASH needs and priorities. Beneficiaries receive ongoing training opportunities, enabling them to contribute effectively to the project's success. They also provide avenues for feedback and suggestions during the project's implementation, ensuring

that the projects remain attentive to community needs. The active involvement of beneficiaries is crucial in influencing the design and execution of WASH initiatives, enhancing their effectiveness and local relevance. Additionally, beneficiaries participate in planning and decision-making processes, which fosters a strong sense of ownership and responsibility for the projects. This collaborative method enhances project sustainability and cultivates a dedicated and engaged community, crucial for the enduring success of WASH initiatives in the area.

The results for beneficiary participation show the highest positive correlation with the dependent variable, with a correlation coefficient of 0.736. This indicates a very strong relationship between beneficiary involvement and the performance of the WASH projects. The high correlation suggests that the active participation of beneficiaries significantly contributes to the success of the projects. This highlights the crucial role of engaging the community in achieving project goals, with beneficiary participation being the most influential factor among the variables examined. The correlation is statistically significant at the 95% confidence interval. Beneficiary participation strongly correlates with project performance; its actual impact is relatively moderate. For every one-unit increase in beneficiary participation, the performance of the WASH project is expected to increase by 0.366 units. This suggests that while beneficiary engagement is crucial, its effect on performance, though significant, may not be as pronounced as other factors like project team or project leader. Nonetheless, it still plays a vital role in influencing the success of the project.

Conclusion of the study

The study concludes that donor engagement, beneficiary participation are all essential factors that significantly influence the performance of community-based Water, Sanitation, and Health (WASH) projects in Makueni County. Donor engagement plays a pivotal role in providing technical expertise, ensuring financial oversight, and aligning project objectives with community needs. The active involvement of donors in the planning and decision-making processes fosters collaboration and helps maintain the relevance of WASH projects. Moreover, their financial supervision contributes to efficient resource management and project sustainability.

Beneficiary participation is also crucial in the effectiveness of WASH projects. When beneficiaries actively engage in identifying their needs, providing feedback, and contributing to decision-making processes, it leads to a greater sense of ownership and responsibility. This involvement ensures that the projects are tailored to the community's needs and increases their sustainability. Furthermore, beneficiaries' continuous training and active participation in project activities help ensure long-term success and local relevance.

Recommendations of the study

Donor engagement and performance of community-based Water, Sanitation and Health projects in Makueni County

Donors are encouraged to actively participate in every stage of the project lifecycle, from planning to execution. Their involvement ensures that projects are tailored to meet the evolving needs of the community. By collaborating closely with stakeholders during these phases, donors can help set realistic goals and adapt strategies to address challenges as they arise. This comprehensive engagement fosters a sense of shared responsibility and ensures that the project remains relevant and impactful throughout its duration.

Donors' technical expertise is critical in addressing complex issues within WASH projects, offering innovative solutions and ensuring best practices are followed. Additionally, the timeliness and sufficiency of financial support are pivotal for the seamless execution of project activities. Ensuring that funding aligns with project schedules minimizes delays and

interruptions, which can adversely affect outcomes. Regular evaluation of technical and financial contributions also helps in identifying and addressing potential gaps.

By increasing their involvement in project monitoring, donors can play a significant role in ensuring resource optimization. This includes assessing project progress, providing feedback, and overseeing financial management to prevent cost overruns and inefficiencies. Enhanced monitoring systems promote accountability and allow for real-time adjustments, contributing to better financial management and sustained project outcomes. Donors' commitment to this aspect reinforces trust among stakeholders and boosts the overall efficiency of WASH initiatives.

Beneficiary participation and performance of community-based Water, Sanitation and Health projects in Makueni County

The study recommends regularly scheduled community meetings and feedback sessions provide that platform for beneficiaries to voice their concerns, suggestions, and evaluations throughout the project lifecycle. Such forums create a feedback loop that allows the project team to address emerging issues promptly, adapt strategies, and enhance transparency. These sessions also promote inclusivity by ensuring that diverse groups within the community, such as women, youth, and marginalized members, have an equal opportunity to contribute to the project. Regular interactions build trust and strengthen the relationship between project implementers and beneficiaries.

The study also recommends training beneficiaries to equip them with the skills and knowledge needed to actively participate in and manage project activities. Training can focus on areas such as water conservation, sanitation practices, and basic project management skills. Empowered beneficiaries are better positioned to maintain project outcomes, troubleshoot issues, and take on leadership roles within their community. Continuous capacity-building efforts help create a pool of knowledgeable community members who can sustain WASH initiatives long after donor involvement has ceased.

Recommendations for further studies

For further studies, it is recommended to explore the long-term sustainability of community-based WASH projects in Makueni County by investigating the post-implementation phase and the factors that influence the maintenance of these projects. Future research could also examine the role of government policies and local governance in shaping the success of WASH initiatives, as well as the impact of climate change on water, sanitation, and health outcomes in rural areas. Additionally, studies could investigate the effectiveness of different beneficiary participation models and how they influence project outcomes across diverse communities.

Future research could examine how donor engagement - from financial contributions to build capacity or technical support - affects specific areas of WASH project performance. Studies could also assess the effects of donor engagement in varying political and socio-economic contexts, and help identify best practices for donor-stakeholder partnerships in different contexts.

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