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PROJECT STAKEHOLDERS' PARTICIPATION AND IMPLEMENTATION OF WATER PROJECTS IN KENYA

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ABSTRACT

Despite the efforts made to improve water access and management in Kenya, many communities in the region still experience inadequate access to clean and safe water. Literature has shown that stakeholder engagement and consultation are positively associated with the successful implementation of projects. Therefore, a study focused on relationship between project stakeholders' participation and implementation of water projects in Kenya. This study was grounded on Norm Activation Theory. Cross-sectional research design and positivist philosophy was used. The target population was 321 completed water projects under water works development agencies in Kenya. The sample frame was 321 Key informants drawn from the 321 completed projects. The sample size for the study was 178 Project staff serving termed as key informants. Primary data was obtained using a structured questionnaire and secondary data established from project files. Eighteen (18) respondents from the target population were used to pilot the questionnaire. Descriptive statistics such as means, and standard deviation were used to summarize findings of the research variables. The study concludes that project stakeholders' participation has a positive and significant relationship on implementation of water projects in Kenya. Based on the findings, the study recommends that project stakeholders should be actively involved in the planning and design phases to ensure their needs and concerns are addressed from the outset. Organizing participatory workshops and focus groups can help gather valuable input and foster a sense of ownership among stakeholders.

Key Words: Project Stakeholders' Participation, Implementation of Water Projects

Background of the Study

Water projects in Kenya play a critical role in addressing the challenges of water scarcity and ensuring sustainable water supply for the population. Given the country's diverse climatic conditions and varying levels of water accessibility, the implementation of these projects requires a multifaceted approach that incorporates community involvement, government policy, and international support. Kenya faces significant challenges in water management, including seasonal variability in rainfall, increased demand due to population growth, and climate change impacts. According to the World Bank (2021), approximately 17 million people in Kenya lack access to clean drinking water, highlighting the urgent need for effective water projects.

Water is an essential element of human, animal and plant life and therefore requires constant supply (Behailu, Pietila, & Katko, 2018). Increasing water demand in many parts of the world and the need to improve clean water supply have led to an increased interest in water use. However, the success of these projects often depends on the management of the stakeholders (Project Management Body of Knowledge (PMBOK), 2017). Regulators, donors and local communities must work together to ensure this priority, or the risk of loss of life is an inevitable consequence. Water resources such as boreholes and basins should be increased and natural water resources such as springs, rivers and lakes should be protected/conserved (Peterson, 2017). Since there is no regular rainfall every year in many parts of the world, the concept of artificial water has emerged because some communities do not have access to natural water (Beratan, 2020).

Project stakeholder management is a crucial aspect of project management, involving the identification, analysis, and engagement of individuals or groups that have an interest in or can affect the outcome of a project (Machado *et al*., 2019). The primary goal of stakeholder management is to ensure that stakeholders' needs and expectations are understood and addressed, fostering positive relationships and minimizing potential conflicts. Active stakeholders' participation is vital for the successful execution of a project. Involving stakeholders in the decision-making process and seeking their input ensures that their perspectives and concerns are considered (Hogsckola, 2021). This participatory approach not only enhances stakeholder commitment and ownership but also leads to better-informed decisions that can positively impact the project's outcome. Encouraging stakeholder involvement through workshops, feedback sessions, and collaborative platforms can harness their expertise and insights, contributing to the project's overall success (Muigai, 2021). This study sought to investigate the effect of project stakeholders' participation on implementation of water projects.

In Kenya water sector is guided by Water Act (2016) which provides the legal basis for regulation, management, and development of water resources, and water and sewerage services. The Act recognizes that water-related functions are a shared responsibility between the county and national governments. The Act established two regulatory organizations, the Water Resources Authority (WRA) and Water Services Regulatory Board (WASREB). It also established the Water Works Development Agencies (WWDA). Despite efforts by the government statistics show that the rate of water supply improvement is inadequate to support the nations long term development goals, some of the challenges in water sector are technical, economic and social issues that lead to unsustainability, low social acceptance and conflicts in water project implementation (Chepyegon and Kamiya, 2018)

The implementation of Water Supply Projects in Kenya is executed by Water Work Development Agencies (WWDAs), County government, Non Govermental organizations and private partners. There are eight WWDAs namely, Athi Water Works Development Agency, Coast Water Works Development Agency, Lake Victoria North Water Works Development

Agency, Lake Victoria South Water Works Development Agency, Northern Water Works Development Agency, Rift Valley Water Works Development Agency, Tanathi Water Works Development Agency and Central Rift Water Works Development Agency. The WWDAs are mandated to develop and maintain water infrastructure in the Country, with an aim of ensuring adequate and sustainable supply of clean water. To achieve their mandate, the agencies are expected to work with other government agencies and stakeholders.

In order to protect consumers and water users Water Supply Regulatory Board (WASREB) was established under the Water Act 2016 with the main objective of protecting the interests and rights of consumers while protecting the interests of other stakeholders in water services. WASREB sets national standards, evaluates tariffs, licenses and permits service providers, monitors compliance and ensures consumer protection (Water Supply Regulatory Board, 2022). WASREB plays an important role in the development of national water service standards and the development of infrastructure for service facilities. This ensures that water activities comply with legal and operational standards. WASREB provides guidance and direction for efficient water management in Kenya by developing standards. WASREB ensures that the needs and concerns of end users are taken into account while implementing projects by prioritizing customer satisfaction, (The Water Act, 2016).

Statement of the Problem

The implementation of water projects in Kenya faces challenges in stakeholder management leading to delays, cost overruns and quality issues. Lack of effective communication, conflicting interests among stakeholders, inadequate stakeholder engagement strategies and limited resources contribute to inefficiencies in implementation of water projects management (Water Supply Regulatory Board, 2022). Despite the infrastructural progress in improving water access, only 33 per cent households have access to piped water (KNBS, 2022 Kenya Demographic and Health Survey). A comprehensive strategy that incorporates targeted water investments, community involvement, and policy refinement is needed to improve access to safe drinking water.

Consistent supply of adequate safe water is a necessity to communities, it is associated with better nutrition, improved health and enhanced economic activities. Machado et al. (2019) argues that water is a significant determinant of socio-economic welfare of the community. Ayeni, Soneye and Akintuyi (2012) argue that consistent supply of adequate safe water needs collaboration among stakeholders and the water resources management team. Project stakeholder management plays a key role in ensuring success, optimality and sustainability in water projects as well as ensuring affordability and adequate distribution of water.

Despite water being a precious commodity, Muema and Ngugi (2021) estimates that access to water in Kenya is 32% which is still low. Statistics places 30% to 60 % of existing water supply systems are not operational due to breakdown (Kariuki, 2015). This is attributed to failure to plan for maintenance of water infrastructure (Nzomo & Gachengo, 2021) and the fact that operation and maintenance of community water projects are given little attention (Kosgei, 2021). According to Maragia et al. (2018), unsustainability in rural water supply projects in Kenya can be blamed on low community participation levels, poor or lack of freshwater management, non-community owned projects, inadequate financial capacity, inadequate systems maintenance skills and poor construction.

Deliberate efforts have been made to improve water access and management in Kenya including enhancing community involvement, technology adoption, enhancing financing among other initiatives (Muigai, 2013). Despite these efforts, many communities still lack access to clean and safe water. Majority of households still rely on surface water sources that are often contaminated (Kosgei, 2021) with up to 60% of households reporting cases of water-related illnesses resulting probably from water contamination (Ochieng & Onyango, 2019).

Furthermore, 65% of water projects still face challenges of conflicts between community groups, government agencies, and private sector entities (Nyabera, 2015) while 60% of water projects lack robust monitoring and evaluation systems (Ochieng & Onyango, 2019).

In studies in other contexts, stakeholders participation has been identified as a determinant of successful implementation of projects. For example, Alameri (2022) in rural communities in Abu Dabi, Demirkesen and Reinhardt (2021) in Poland and Woldesenbet (2020) in Ethiopia. These studies were conducted in different project and cultural contexts and their findings cannot be generalized in reference to Kenyan context.

Limited study has been conducted in Kenya to provide findings specific to the Kenyan context. A study in Kenya is necessary to provide a cultural-specific understanding of the effect of project stakeholders' participation on the implementation of water projects. To fill this gap, the current study sought to investigate the effect of stakeholders participation on implementation of water projects in Kenya.

Specific Objectives

The study was guided by the following specific objective;

1. To assess the relationship between project stakeholders' participation and implementation of water projects in Kenya

Theoretical Review

Norm Activation Theory

Norm Activation Theory (NAT) was first put forward by Schwartz in 1977. It is based on the idea that moral values determine how people believe and behave and emphasizes that people's behavior is influenced by the norms they perceive regarding their situation (Kim, 2023). In the context of project management, positive needs and expectations for strategic analysis can be used to encourage participation and open the necessary structures to support the activities of stakeholders. NAT suggests that individuals are more likely to engage in the behavior when they perceive the behavior to be in line with their group's norms and when the behavior is perceived as important to the group, an approach that is very important in project management environment, especially water projects with numerous stakeholders (Amadi, Carrillo, & Tuuli, 2019).

In the context of water projects, positive needs and expectations can be used to identify strategies to open the structures necessary to support the activities of stakeholders and encourage participation. Such participation can is associated with reduced stakeholder risks. However, NAT has received some criticism from researchers for being too limited or lack of attention to individual differences, simplistic interpretation of behavior, lack of attention to the role of context, and ineffectiveness (Liu, Liu, & Xu, 2023)

In this study, NAT was adopted to explain the impact of needs and expectations analysis on operations of water projects. NAT considers that a positive and optimistic analysis strategy can be used to uncover key points that facilitate collaboration and support for the work of stakeholders towards the success of water projects.

Conceptual Framework

Mugenda and Mugenda (2013) defined the concept of conceptual framework as the hypothetical model for relationship between dependency and independence between variables. Below is a representation of the variables that will be explored in this study.

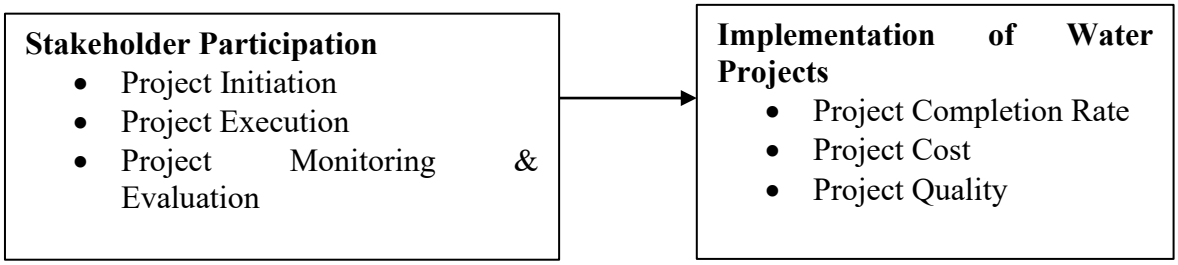

Figure 1: Conceptual Framework

Project Stakeholder Participation

Stakeholders' Participation refers to the involvement of stakeholders in the decision-making and implementation process of a project. It is the process of engaging stakeholders in the project activities, and giving them an opportunity to express their views and opinions on the project (Adom & Simatele, 2022). It is a critical aspect of project management as it helps to ensure that the project is aligned with the needs and expectations of stakeholders and that the project outcomes are acceptable to all parties involved (Buertey et al., 2016).

In terms of project identification, stakeholders' participation can take the form of identifying potential stakeholders, and assessing their level of interest and influence on the project (Alayande et al., 2021). This helps to ensure that all stakeholders are considered and that the project is aligned with their needs and expectations. Stakeholders' participation also includes involving stakeholders in the planning process, such as by holding workshops or focus groups to gather their input on project goals and objectives (Global Water Partnership, 2015). This helps to ensure that the project is aligned with the needs and expectations of stakeholders and that the project outcomes are acceptable to all parties involved. Participation of stakeholders also includes involving stakeholders in the implementation process, such as by holding regular meetings to gather their input on project progress, and by involving them in monitoring and evaluating the project (Gable & Shireman, 2005). This helps to ensure that the project is aligned with the needs and expectations of stakeholders and that the project outcomes are acceptable to all parties involved (Adom & Simatele, 2022).

A critical review of the literature on the variable on Stakeholders' Participation highlights the importance of involving stakeholders in the decision-making process. Studies have shown that involving stakeholders in the decision-making process leads to increased stakeholder buy-in and improved project outcomes (Buertey et al., 2016; Amadi et al., 2014). Additionally, it is important to regularly involve stakeholders in the project implementation process, as it helps to ensure that their needs and expectations are being met throughout the project life cycle. It is a critical aspect of project management as it helps to ensure that the project is aligned with the needs and expectations of stakeholders and that the project outcomes are acceptable to all parties involved (Giangregorio, 2020).

Empirical Review

Stakeholders' Participation

Demirkesen and Reinhardt (2021) examine the outcome of stakeholders on projects performance in Poland. This study adopted the descriptive research design targeting a population that includes 13 government projects. Supervisors, project manager and other support personnel on the project were involved in the study through questionnaires. The findings showed that stakeholder engagement is an important part of the response process. The

study concluded that stakeholder engagement was positively correlated with performance of projects. There was also a positive relationship between participants' participation and performance. Collaboration with stakeholders is very important for the promotion of the project. Collaboration with organizations ensures that various options are considered when developing project policies. The study suggested that stakeholders should be involved in the success of the project. Stakeholders should be consulted before any changes are made to the governing body.

In another study, Magassouba, Tambi, Alkhlaifat and Abdullah (2019) examined the outcome of stakeholder engagement on development work in Guinea. It was clear that stakeholders play an important role in project work. Similarly, in Guinea, Administration and Management of Major Projects and Public Procurement (ACMPPP, 2014) reported a similar relationship. Stakeholders identified included government through sector, international organizations such as UNDP, World Bank, African Development Bank, development and manufacturing companies and NGOs. Similarly, Nyabera (2017) tested the outcome of Stakeholder Engagement on project success with focus on Compassion International Aid Project in Mwingi County. This study adopted the descriptive research design and both qualitative and quantitative methods were used in this study. The target population is 391 stakeholders in 4 aid projects with sample size of this study being 191 individuals. Data was gathered using questionnaires and interviews. This study showed that in projects with representative representatives in project management, the participation of the participants in the initiative has a positive effect on the work and that participation of the participants in the planning work has a positive effect on the work.

Ruwa (2019) assessed the effectiveness of the project. The study was limited to timely completion, cost impact and project sustainability, the objectives of identifying the impact of stakeholder engagement on project initiation, project planning, project implementation, and finally the M&E of the successful project. The interviewees were representatives of the two donors, representatives of offices and project beneficiaries. The total sample size used in the study is 70. A descriptive sample was used in the analysis of the data. The study found that stakeholder engagement has a positive impact on project performance.

RESEARCH METHODOLOGY

Research Design

Research design is a plan to collect, measure and analyze data to find answers to research questions (Cooper & Schindler, 2016; Kothari, 2014). According to Kothari and Garg (2018), research design organizes data collection and analysis events in a process that unifies research objectives and methods.

The research used cross-sectional research methods. This design is suitable for situations where the relationship between two variables needs to be determined over a short time (Cooper & Schindler, 2011).

Research philosophy is the basis of knowledge, the nature of knowledge, which includes ideas about how scientists see the world (Saunders, Lewis, & Thornhill, 2017). This study adopted positivist philosophy. The basis of positivism can be found in empiricism, which states that all true knowledge is based on qualitative information obtained through observation.

Target Population

Target population is the total number of individuals or subjects for which research data is used for analysis; he is a "universal" scientist (Kothari & Garg, 2019). This study focused on the water projects in Kenya. According to the ministry of water sanitation and irrigation (2023),

there are 321 water projects that were implemented from 2018 to 2022 with a budget of 10 million shillings by the water works development agencies under the ministry of water sanitation and irrigation. This study therefore targeted all the 321 water projects. According to Cooper and Schindler (2017), a good research must have a unit of analysis and unit of observation. In the current study, unit of analysis is individual active water project while the staff involved in the study constituted the unit of observation.

Sampling Frame

A sampling frame is a list of all the items taken from which a representative sample is obtained for research purposes (Saunders, Lewis, & Thornhill, 2016). The sample frame for this study was composed of 321 Key informants drawn from the 321 completed projects implemented by the water works development agencies. These personnel are selected on the basis that they were involved in actions and decisions that relate to stakeholder issues and project implementation. Similarly, they serve in management level and therefore, they can give research data on project manager competency. Table 1 presents the sample frame of the study.

Table 1: Target Population

No.	Agency	Number of Projects
1.	Lake Victoria South Water Works Development Agency	50
2.	Lake Victoria North Water Works Development Agency	47
3.	Tanathi Water Works Development Agency	38
4.	Athi Water Works Development Agency	58
5.	Coast Water Works Development Agency	21
6.	Central Rift Water Works Development Agency	24
7.	North Rift Valley Water Works Development Agency	15
8.	Tana Water Works Development Agency	38
9.	Northern Water Works Development Agency	30
	Total	**321**

Source: Water Services Regulatory Board (2023)

Sample Size and Sampling Technique

A sample represents a certain percentage of the population, and the frequency distribution of the trait is similar to the distribution of the same trait in the entire population (Saunders, Lewis, & Thornhill, 2016)

Kothari and Garg (2014) explain that the sample size refers to the items selected from the population as a sample, while the sampling technique refers to the process used to select the sample. Sample size for this study was determined using Yamane (1967).

This formula used to calculate the sample size is;

$$n = \frac{N}{1+N(e^2)} \quad \text{..... (3.1)}$$

Where n is the sample size, N is the population size, and e is the level of precision (0.05).

When this formula is applied, the following equation is obtained;

$$n = \frac{321}{1 + 321(0.05^2)}$$

= 178

Therefore, using Yamane (1967), the sample size for this study would be 178 participants. This represents 58.7% of the study's target audience. According to Mugenda and Mugenda (2014),

the sample representing at least 30% of the study population is a suitable sample for the study. Therefore, our sample was appropriate for this study.

According to Cooper and Schindler (2016), sampling is the process of selecting a group of people, situations or behaviors for examination. In cases where it is not possible to include the entire universe in the study, a sample is used (Cooper & Schindler, 2017). Proportionate random sampling was used to select the sample for this study. Proportionate random sampling is appropriate when the population is heterogeneous and can be studied in sub groups. The population was apportioned in terms of the 9 water services development agencies. Sample size for each stratum was determined using the formula 2.

$$n = \frac{N_t}{N_p} N_s \quad \text{..... (3.2)}$$

Where

n- Desired Sample Size for Stratum

N_t- Stratum Size

N_p- Population Size

N_s- Sample size

The sample size for each stratum was as shown in Table 3.2

Table 2: Sample Size

No	Agency	No. of Projects	Sample Size
1	Lake Victoria South Water Works Development Agency	50	28
2	Lake Victoria North Water Works Development Agency	47	26
3	Tanathi Water Works Development Agency	38	21
4	Athi Water Works Development Agency	58	32
5	Coast Water Works Development Agency	21	12
6	Central Rift Water Works Development Agency	24	13
7	Rift Valley Water Works Development Agency	15	8
8	Tana Water Works Development Agency	38	21
9	Northern Water Works Development Agency	30	17
	Total	**321**	**178**

This study selected respondents from each stratum using simple random sampling (Mugenda & Mugenda, 2013). The advantage of random sampling is that it increases the accuracy of the estimation process by providing fewer errors (Cooper & Schindler, 2017).

Data Collection Instruments

There are many ways to collect data, each with its own cost, time constraint, and other resources available to the researcher (Orodho, 2008). The choice of data collection tools is generally important for the research results, so the complexity of the study, response, time and demographic characteristics should be taken into account when deciding on the data collection process (Kothari & Garg, 2014). The study collected primary data through use of questionnaires. Survey is one of the advantages of collecting data especially from many respondents and allows anonymity (Mugenda & Mugenda, 2013).

Data for this study was collected with close-ended questions. In closed questions, respondents are prohibited from answering directly without further explanation, while in open-ended

questions; respondents were asked for their views on the analyzed situation. Likert scale was used to allow respondents to provide their perception.

Data Analysis and Presentation

Data analysis refers to the use of reasoning to understand data collected in order to identify common patterns and document key themes expressed in research (Kothari & Garg, 2014). It involves converting stored data into a form that can be manipulated to produce useful statistics. This includes integrity checks, data compliance, data encoding, and data entry and data maintenance (Mugenda & Mugenda, 2013). In this study, qualitative and quantitative data was collected. Qualitative data was analyzed using content analysis and presented in text form. Quantitative data was analyzed using the Statistical Standard for Social Sciences (SPSS) version 25 program. Quantitative data was analyzed using descriptive statistics such as frequency, percentage, mean and standard deviation. Descriptive statistics allow researchers to interpret the distribution of measurements and complete data (Sekaran & Bougie, 2016). This work also included statistical analysis of quantitative data, including analysis and regression analysis

According to Saunders et al. (2018), correlation is an analytical tool that helps to identify the relationship between two or more variables. Cooper and Schindler (2017) say that the correlation (measured by the correlation coefficient) is the degree of a positive relationship between the variables. Pearson correlation coefficient was used to measure the relationship between independent and dependent variables. The correlation coefficient (r) has two properties: power and direction.

The strength of the relationship is indicated by the degree of trend of r to 1 (the maximum possible). When r = +1, it means that there is a positive relationship between the variables; When r = 0, it means that there is no relationship between the variables, that is, the variables are not equal; When r = -1, it means that variables are inversely related. (Hair et al., 2010)

Regression analysis was used to determine the strength of the relationship between the dependent variable (denoted by Y) and the independent variables (denoted as X). According to Kalnins (2022) a regression model helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed.

RESEARCH FINDINGS AND DISCUSSION

Descriptive Analysis

Project Stakeholders' Participation

The first objective of the study was to assess the relationship between project stakeholder participation and implementation of water projects in Kenya. Respondents were therefore requested to indicate their level of agreement with various statements on project stakeholders' participation and implementation of water projects in Kenya. Table 3 presents summary of the findings obtained.

From the results, the respondents agreed that project stakeholders are involved in project planning (M= 3.953, SD= 0.921). In addition, the respondents agreed that project stakeholders are involved in early stages of project initiation (M= 3.891, SD= 0.816). It was also agreed that project stakeholders are involved in early stages of project monitoring (M= 3.886, SD= 0.758). The respondents also agreed that project stakeholders are involved in early stages of project evaluation (M= 3.885, SD= 0.794). The results are supported by the findings of Demirkesen and Reinhardt (2021) who established that stakeholder engagement was positively correlated with performance of projects. There was also a positive relationship between participants' participation and performance. Collaboration with stakeholders is very important for the

promotion of the project. Collaboration with organizations ensures that various options are considered when developing project policies. The study suggested that stakeholders should be involved in the success of the project. Stakeholders should be consulted before any changes are made to the governing body.

The respondents agreed that project stakeholder are involved in project decisions (M= 3.853, SD= 0.732). In addition, the respondents agreed that project stakeholders are involved in the maintenance of the projects (M= 3.831, SD= 0.790). Further, the respondents agreed that they are satisfied with the effectiveness of stakeholder involvement (M= 3.829, SD= 0.818). The respondents also agreed that stakeholder involvement ensures informed decisions are made (M= 3.758, SD= 0.952). The results are in line with the findings of Ruwa (2016) who showed that in projects with representative representatives in project management, the participation of the participants in the initiative has a positive effect on the work and that participation of the participants in the planning work has a positive effect on the work

Table 3: Descriptive Statistics on Project Stakeholders' Participation

Statements	Mean	Std. Dev.
Project stakeholders are involved in project planning	3.953	0.921
Project stakeholders are involved in early stages of project initiation	3.891	0.816
Project stakeholders are involved in early stages of project monitoring	3.886	0.758
Project stakeholders are involved in early stages of project evaluation	3.885	0.794
Project stakeholder are involved in project decisions	3.853	0.732
Project stakeholders are involved in the maintenance of the projects	3.831	0.790
Am satisfied with the effectiveness of stakeholder involvement	3.829	0.818
Stakeholder involvement ensures informed decisions are made	3.758	0.952
Aggregate Score	**3.843**	**0.839**

Test for Hypothesis One

The first objective of the study was to assess the relationship between project stakeholders' participation and implementation of water projects in Kenya. The corresponding hypothesis was: There is no significant relationship between project stakeholder participation and implementation of water projects in Kenya.

A univariate analysis was therefore conducted to test the null hypothesis. From the model summary findings in Table 4, the r-squared for the relationship between project stakeholders' participation and implementation of water projects in Kenya was 0.215; this is an indication that at 95% confidence interval, 21.5% variation in implementation of water projects in Kenya can be attributed to changes in project stakeholders' participation. Therefore, project stakeholders' participation can be used to explain 21.5% change in implementation of water projects in Kenya. However, the remaining 78.5% variation in implementation of water projects in Kenya suggests that there are other factors other than project stakeholders' participation that explain implementation of water projects in Kenya

Table 4: Model Summary for Project Stakeholders' Participation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.464[a]	.215	.213	.70838

a. Predictors: (Constant), Project Stakeholders' Participation

The analysis of variance was used to determine whether the regression model is a good fit for the data. From the analysis of variance (ANOVA) findings in Table 5, the study found out that

that Prob>$F_{1,169}$= 0.000 was less than the selected 0.05 level of significance. This suggests that the model as constituted was fit to predict implementation of water projects in Kenya. Further, the F-calculated, from the table (271.80) was greater than the F-critical, from f-distribution tables (3.897) supporting the findings that project stakeholders' participation can be used to predict to predict implementation of water projects in Kenya.

Table 5: ANOVA for Project Stakeholders' Participation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.933	1	40.933	271.80	.000[b]
	Residual	25.602	169	0.151		
	Total	66.535	160			

a. Dependent Variable: Implementation of water projects in Kenya
b. Predictors: (Constant), Project Stakeholders' Participation

From the results in table 6, the following regression model was fitted.

$$Y = 1.808 + 0.469\,X_3$$

(X_1 is Project Stakeholders' Participation)

The coefficient results showed that the constant had a coefficient of 1.808 suggesting that if project stakeholders' participation was held constant at zero, Implementation of water projects in Kenya would be at 1.808 units. In addition, results showed that project stakeholders' participation coefficient was 0.469 indicating that a unit increase in project stakeholders' participation would result in a 0.469 unit improvement in implementation of water projects in Kenya. It was also noted that the P-value for project stakeholders' participation was 0.000 which is less than the set 0.05 significance level indicating that project stakeholders' participation was significant. Based on these results, the study rejected the null hypothesis and accepted the alternative that project stakeholders' participation has positive significant influence implementation of water projects in Kenya.

Table 6: Beta Coefficients for Project Stakeholders' Participation

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.808	.215		8.398	.000
	Project Stakeholders' Participation	.469	.052	.464	9.032	.000

a. Dependent Variable: Implementation of water projects in Kenya

CONCLUSIONS AND RECOMMENDATIONS

Conclusions of the Study

Project Stakeholders' Participation

The first null hypothesis tested whether project stakeholders' participation had a significant effect on implementation of water projects in Kenya. The study's findings revealed that project stakeholders' participation is statistically significant in explaining the implementation of water projects in Kenya, and this influence was found to be positive. In other words, an improvement in project stakeholders' participation positively impacts implementation of water projects in

Kenya. The study concludes that project stakeholders' participation has a positive and significant effect on implementation of water projects in Kenya. Findings revealed that project initiation, project execution, project monitoring, project evaluation and project decision engagement influence implementation of water projects in Kenya.

Recommendations of the Study

This study recommends that project stakeholders should be actively involved in the planning and design phases to ensure their needs and concerns are addressed from the outset. Organizing participatory workshops and focus groups can help gather valuable input and foster a sense of ownership among stakeholders. Additionally, involving stakeholders in the identification of project goals, objectives, and key performance indicators ensures that the project aligns with their expectations and priorities. Early and active engagement sets a strong foundation for cooperation and support throughout the project lifecycle.

REFERENCES

Adom, R., & Simatele, M. (2022). The role of stakeholder engagement in sustainable water resource management in South Africa. *Natural Resources Forum*, 46(4), 410-427. https://doi.org/10.1111/1477-8947.12264.

Armenia, S., Dangelico, R., Nonino, F., & Pompei, A. (2019). Sustainable Project Management: A Conceptualization-Oriented Review and a Framework Proposal for Future Studies. *Sustainability*, 11(9), 2664; https://doi.org/10.3390/su11092664.

Ayeni, A., Soneye, A., & Akintuyi, A. (2012). Contributions by Stakeholders to Water Supply in the Rural - Urban Communities of Ondo State, Nigeria. *Lagos Journal of Geo-Information Sciences* , 2(1), 62-75. file:///C:/Users/USER/Downloads/ContributionsbyStakeholderstoWaterSupplyintheRural-UrbanCommunitiesofOndoStateNigeria.pdf.

Chepyegon, C., & Kamiya, D. (2018). Challenges Faced by the Kenya Water Sector Management in Improving Water Supply Coverage. Journal of Water Resource and Protection, 10(1), 1-16. https://www.scirp.org/journal/jae.2018.0116.

Dwiwedi, R., & Dwiwedi, P. (2021). Role of stakeholders in project success: theoretical background and approach. *International Journal of Finance, Insurance and Risk Management*, 8(1), 38-49.

Gibson, K., Lamm, A., Woosman, K., & Croom, D. (2021). Predicting Intent to Conserve Freshwater Resources Using the Theory of Planned Behavior (TPB). *MDPI*, 13(18), 2581; https://doi.org/10.3390/w13182581.

Kosgei, N. (2021). Stakeholder Consultation and Implementation Water Projects: A Case of Machakos County, Kenya. *East African Journal of Business and Economics*, 4(1), https://doi.org/10.37284/eajbe.4.1.472.

Maragia, J., Omboto, P., & Maket, L. (2018). Influence of stakeholder participation on the planning of water projects in Kisii County, Kenya. *International Journal of Innovative Research and Development*, 7(8). DOI:10.24940/IJIRD/2018/V7/I8/AUG18071.

Ministry of Water, Sanitation, and Irrigation. (2021). *Water Projects*. Retrieved July 7, 2023, from Ministry of Water, Sanitation, and Irrigation, 2021: https://ppp.water.go.ke/

Mubita, A., Libati, M., & Mulonda, M. (2017). The Importance and limitations of participation in development projects and programmes. *European Scientific Journal*, 238-252. doi: 10.19044/esj.2017.v13n5p238.

Nyabera, T. (2015). *Influence of stakeholder participation on implementation of projects in Kenya: a case of compassion international sssisted projects in Mwingi Sub-county.* Nairobi. Retrieved from http://erepository.uonbi.ac.ke/handle/11295/97664: University of Nairobi.

Nzomo, P., & Gachengo, L. (2021). Stakeholders' participation and its effect on water projects sustainability in Machakos County, Kenya. *International Journal of Scientific and Research Publications*, 11(12), 222-228. http://dx.doi.org/10.29322/IJSRP.11.12.2021.p12032.

Reed, M., Vella, S., Challies, E., & Vente, J. (2017). theory of participation: What makes stakeholder and public engagement in environmental management work? *Restoration Ecology*, 26(1), 7-17. https://doi.org/10.1111/rec.12541.

Rossmann, C. (2020). Theories of Reasoned Action and Planned Behavior. *The International Encyclopedia of Media Psychology*, https://doi.org/10.1002/9781119011071.iemp0108.

Salazar, L., & Armando, L. (2017). The Resource-Based View and the Concept of Value The Role of Emergence in Value Creation. *Artículos de Investigación*, 35. Available in: https://www.redalyc.org/articulo.oa?id=571864085002.

Saunders, B., Sim, J., Kingstone, T., & Baker, S. (2018). Saturation in qualitative research: exploring its conceptualization and operationalization. *Qual Quant* , 52, 1893–1907. https://doi.org/10.1007/s11135-017-0574-8.

Water Sector Trust Fund. (2022). *Financing Water*. Retrieved July 7, 2023, from Water Sector Trust Fund: https://waterfund.go.ke/

Water Supply Regulatory Board. (2022). *Financing Urban Water Services Shadow Ratings Kenya Report.* Nairobi. Retrieved from https://wasreb.go.ke/publications/: Water Supply Regulatory Board.

Woldesenbet, W. G. (2020). Analyzing multi-stakeholder collaborative governance practices in urban water projects in Addis Ababa City: procedures, priorities, and structures. *Applied Water Science*, 10:44, 44-65. https://doi.org/10.1007/s13201-019-1137-z .

Woldesenbet, W., & Kebede , A. (2020). Multi-stakeholder collaboration for the governance of water supply in Wolkite, Ethiopia. *Environment, Development and Sustainability*, 23, 7728–7755. https://doi.org/10.1007/s10668-020-00943-3.

World Health Organization. (2022). *Drinking Water*. Retrieved July 7, 2022, from World Health Organization: https://www.who.int/news-room/fact-sheets/detail/drinking-water

Wynn, C., Smith, L., & Killen, C. (2021). How Power Influences Behavior in Projects: A Theory of Planned Behavior Perspective. *Project Management Journal*, 52(6), https://doi.org/10.1177/875697282110525.

Xia, N., Guo, J., & Lin, Y. (2021). Managing stakeholder attributes for risk mitigation: evidence from construction project contractors. *International Journal of Managing Projects in Business*, 14 (7), 1605-1625. https://doi.org/10.1108/IJMPB-11-2020-0345.

Zwikael, O., Salmona, M., Meredith, J., & Zarghami , S. (2022). Enhancing project stakeholder communication under insufficient knowledge of project management concepts. *Engineering, Construction and Architectural Managemen*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/ECAM-02-2022-0154.