MONITORING AND EVALUATION MANAGEMENT PRACTICES AND PERFORMANCE OF COMMUNITY WATER PROJECTS IN MACHAKOS COUNTY, KENYA

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ABSTRACT

The performance of water projects in Kenya has been a major concern, especially because of the huge benefits to be accrued by the beneficiaries and as well because of the huge investments made on these projects. Project managers always target project success. The purpose of this study was to determine the role of Monitoring and Evaluation practices on the performance of community water projects in Machakos County, Kenya. Specifically, the study sought to assess the role of M&E stakeholder involvement on the performance of community water projects in Machakos County, Kenya, to examine the role of M&E Planning review on the performance of community water projects in Machakos County, Kenya. This study used descriptive research design. The unit of analysis was the completed and on-going water projects in Machakos County while the unit of observation was 152 Project managers, M&E officers, project officers/coordinators and technical staff involved in the projects. The study used census method hence all the respondents participated in the study. Data was collected by use of semi-structured questionnaires. The pilot group was 15 individuals which represented 10% of the total study sample size. The pilot group was excluded from the final study. Qualitative data collected was analyzed using content analysis and presented in prose form. Quantitative data collected was analyzed using descriptive statistics techniques such as frequency, percentages, and means and summary graphs, pie charts, and frequency distribution tables. Pearson R correlation was used to measure the strength and direction of linear relationship between variables. Multiple regression models were fitted to the data in order to determine how the independent variables influence the dependent variable. The findings were presented in tables and figures. The study concludes that M&E stakeholder involvement has a positive and significant influence on the performance of community water projects in Machakos County, Kenya. In addition, the study concludes that M&E Planning review has a positive and significant influence on the performance of community water projects in Machakos County, Kenya. Based on the findings, the study recommends that the management of community water projects should implement regular stakeholder workshops that not only update participants on project progress but also solicit their feedback and input on current challenges and potential improvements. These workshops should include representatives from local communities, project beneficiaries, government officials, and other relevant partners. The study also recommends that the management of community water projects should implement a structured reporting system that ensures regular, clear, and accessible updates on project progress and outcomes.

Key Words: Monitoring and Evaluation practices, M&E stakeholder involvement, M&E Planning review

Background of the Study

According to Javier and Alonso (2017), more than 884 million people worldwide lack access to safe drinking water and an estimated 2.5 billion lack access to basic sanitation services. They further state that the World Health Organization estimates that 6.3% of all deaths worldwide are caused by limited access to safe drinking water and limited access to improved sanitation facilities and hygiene practices. Therefore, achieving universal access to the two still remains a crucial goal of the global development agenda. Hutton *et al.* (2017) states that water and sanitation interventions have demonstrated economic benefits ranging from $5 to $46 per $1 invested.

In this context, Monitoring and Evaluation (M&E) practices have emerged as powerful tools to assess and enhance the effectiveness of water projects in achieving sustainability goals (Swallow et al., 2019). M&E in water projects involves the systematic collection, analysis, and interpretation of data to measure project performance, track progress towards objectives, and assess the impact of interventions on the environment, society, and the economy (AfDB, 2020). By providing feedback loops and evidence-based decision-making, M&E can significantly influence the success of water projects.

The prominence given to aid effectiveness and results-based development compels practitioners to empirically work towards manifestation of impacts of their projects and programs resulting in a shift of focus regarding Monitoring and Evaluation from a concentration on inputs and outputs to a concentration on outcomes and impacts (Keita et al 2019). The aim of Monitoring and Evaluation practices is to heighten the chances of project success. Project success can be regarded as having been achieved once sustainability of the project has been realized. Nuguti (2019) states that in developing countries getting to the level of sustainability of a project is immensely difficult, owing to inherent challenges.

The concept of project M&E has been evolving over time, changing the way projects are managed (Nyonje *et al.,* 2018). Since 1950s, the practice of M&E has been focusing mainly on the efficient utilization of resources (Rodgers & Williams, 2016). With the increasing growth and increased awareness of the role of M&E in project performance, project funders (stakeholders) view M&E as a critical aspect of the project implementation process (Owolabi *et al,* 2018). According to Naidoo (2016), effective project M&E provide bases on which an organization committee can make an informed decision regarding an ongoing project.

When an organization is planning to solve issues, it considers M&E as an important tool to help in the planning as a donor prerequisite despite the fact that it is a management tool (Alcock, 2019). The stakeholders of the organizations, tend to use M&E as way to find out how their funds are used in the projects they invest despite the fact that the main purpose of M&E is to ensure effective progress and improvement of the organization's projects as a whole. For an M&E project to be successful, Naidoo (2011), suggests the management to have well founded project decisions. M&E Planning, M&E Training and Information systems are the factors that categorize M&E as a management function (Roza, 2016).

However, a number of organizations are becoming more and more cautious of factors that affect the performance of projects and how the projects need to be carefully handled. According to Kerzner (2017) Monitoring and Evaluation is one of the major factors that affect the project performance, programming and policy. Madden, Stuart, (2018) also supports him by indicating that the quality and effects of projects are controlled by monitoring and evaluation trough projects and work plans. The function that controls management is monitoring while the function that is post-event is called evaluation although the two factors are largely inter-related. The two factors involve making decisions on how to progress the organization through systematic and informed decisions followed

during the projects, (UNDP, 2019). When the management monitors its data during the projects, then it is termed as evaluating.

Regional Perspective on Monitoring and Evaluation Practices

Ghana, Kenya, Benin, Uganda, and South Africa are among the African nations with a recognized ministry for monitoring and evaluation (M&E). M&E's interdisciplinary nature has complicated its growth in South Africa, attempting to establish itself in a historically discipline-based higher education system. In the last ten years, however, the number, scope, and quality of evaluations conducted in this country have increased. NGOs and government agencies have been outsourcing evaluation practices, and every government ministry now has an M&E department. The South African Monitoring and Evaluation Association (SAMEA) brings together M&E practitioners, M&E trainees, development agencies, and government officials in all of its biennial conferences (Abrahams, 2015).

Botta (2016) noted that an exemplary project implementation depends on the project management strategies used to support stakeholders in executing project tasks. The study focused on the issues affecting implementing community-based development projects in Chad. Persistent resource mobilization, active information-gathering monitoring of the operational environment, and stakeholder interaction are essential elements of successful project implementation.

Monitoring and evaluation of projects is not only important to projects, but it is part and parcel of project design (PMBOK, 2016). Resources are scarce and they need to be properly and efficiently utilized. Monitoring and evaluation has been used globally over the last several years as an integral part of the project cycle and of good management practice (Olive, 2018). Olive observes that monitoring and evaluation is fundamental if the project goals, objectives and success are to be realized.

Monitoring and evaluation provide answers to questions regarding the output, effects and impact of the project or program in the life of the target population. It establishes the necessary linkage among a set of activities undertaken in project planning and management: identification of problems, feasibility study, and design of the project/program, approval process, organization, implementation and supervision processes, completion, evaluation and follow-up. Information secured through monitoring and evaluation must be relevant, that is, geared to specific needs of program and project administrators; timely, that is, available and accessible at the time decisions are taken; and accurate, that is, reliable and empirically verifiable (Ndegwa, 2019). This study therefore seeks to establish the influence of Monitoring and Evaluation practices on the performance of water projects in Machakos County, Kenya.

Statement of the Problem

The performance of water projects in Kenya has been a major concern, especially because of the huge benefits to be accrued by the beneficiaries and as well because of the huge investments made on these projects. Project managers always target project success. This involves finishing the project on time, within budget, meeting end product specifications, meeting customer needs and meeting management objectives (Minyiri, & Muchelule, 2018). According to the Kenya National Water Services Strategy (2018 - 2022), sustainable water access levels in Kenya were estimated to be at 60%, while sanitation was estimated at 68%. However, many water projects in Kenya experience project time overrun, budget overrun and as well do not meet product specifications, customer needs and management objectives (Ndegwa, 2019). This is evident in most of the water projects that have been undertaken over time with little impact despite the resources used. People lack proper services because systems fail, often because not enough resources are invested to appropriately build and maintain them, and also because of the stress that the fast-growing population places on the existing infrastructure.

In Kiambu County, 50% of the water projects implemented were successfully completed. This indicates that various water projects face enormous challenges of implementation. In Kakamega, Kanda, Muchelule and Mamadi (2016) established that financial capacity, owner interference, and an imposition of contract duration, decision-making ability and change in project scope influence project implementation

When projects are unsuccessful or delayed, this implies that targeted project benefits are only realized in part or never at all (Mutoro *et.al*., 2017). Delayed project completion has both high costs to society and incapacitating effects on the contracting parties (Ondari & Gekara, 2016). In particular, delayed completion of water and sanitation projects makes it difficult to achieve the required access to affordable, safe and adequate water supply services. Investments in water and sanitation projects in Kenya are colossal. For instance, the total development expenditure on water supplies (includes sewerage and waste management) and related services increased from KShs 20.5 billion in 2012/13 to KShs 65.2 billion in 2020/21 financial year (KNBS, 2022).A report by World Bank (2015) on Machakos county shows that only 21% of the intended water projects have been effectively and efficiently completed, 45% are still struggling while the remaining have been abandoned or failed. This indicates that various water projects face enormous challenges of performance in the county. In 2017, the abandoned and failed water projects were reported to be at 38%, 44% in 2018, and 47% in 2019 (Kiseu, 2019).

Monitoring and Evaluation is one of the key aspects of Project management. It is an extremely important management tool used to track progress and performance of a project and facilitate decision making (Sera & Beaudry, 2017). While some empirical studies have been undertaken in relation to the performance of water projects in Kenya, none has specifically looked at the influence of Monitoring and Evaluation practices on the performance of water projects, and particularly those in Machakos County. There is also none that has linked the four independent variables under this study with the performance of water projects. In addition, the studies used different research designs and targeted different projects which differ from the current study in terms of institutional frameworks and legal frameworks. There is therefore inadequate empirical insight to inform interventions so as to enhance the performance of such projects. To fill the highlighted gaps, the current study sought to establish the influence of Monitoring and Evaluation practices on the performance of community water projects in Machakos County, Kenya.

General Objective

The purpose of this study was to determine the role of Monitoring and Evaluation practices on the performance of community water projects in Machakos County, Kenya.

Specific Objectives

This study was guided by the following specific objectives:

i.   To analyze the role of M&E stakeholder involvement on the performance of community water projects in Machakos County, Kenya.
ii.   To examine the role of M&E Planning review on the performance of community water projects in Machakos County, Kenya.

Theoretical Review

Stakeholders Theory

Stakeholder Theory, developed by R. Edward Freeman in the 1980s, is a management and organizational theory that emphasizes the importance of considering the interests and concerns of various stakeholders in decision-making processes. The theory posits that organizations should not

only prioritize the interests of shareholders but also take into account the needs and expectations of all individuals and groups (stakeholders) who are directly or indirectly affected by the organization's actions (Freeman, 1984).

The central idea of Stakeholder Theory is that stakeholders, including employees, customers, suppliers, local communities, government entities, and environmental organizations, have a legitimate interest in the organization's operations and outcomes. As such, they should be actively engaged in the decision-making process. Stakeholder Theory recognizes that different stakeholders may have diverse and sometimes conflicting interests. It encourages organizations to balance these interests while considering the long-term sustainability and overall societal impact of their actions.

The theory has been widely used in various fields, including business management, corporate governance, and public policy. Organizations have adopted Stakeholder Theory to develop more ethical and sustainable business practices, improve corporate social responsibility initiatives, and enhance stakeholder relations (Donaldson & Preston, 1995). Moreover, in project management contexts, stakeholder engagement is considered critical for successful project outcomes.

Despite its widespread adoption, Stakeholder Theory has faced critiques. Some critics argue that the theory's practical implementation can be challenging, particularly when identifying and prioritizing stakeholders' interests (Mitchell et al., 1997). Different stakeholders may have competing needs, making it difficult to satisfy all parties involved. Additionally, some argue that the theory may be overly inclusive, leading to decision-making paralysis as organizations attempt to address every stakeholder's interests. This study used stakeholders' theory to determine the role of Monitoring and Evaluation stakeholder involvement on the performance of community water projects in Machakos County, Kenya.

Systems Theory

Systems theory was first introduced by biologist Ludwig von Bertalanffy in (1972). The theory holds that a system is a cohesive conglomeration of interrelated and interdependent parts that are either natural or man-made. Every system is delineated by its spatial and temporal boundaries, surrounded and influenced by its environment, described by its structure and purpose, and expressed in its functioning. In terms of its effects, a system can be more than the sum of its parts if it expresses synergy or emergent behavior (Drack & Pouvreau, 2015). Changing one part of the system usually affects other parts and the whole system with predictable patterns of behavior. For systems that are self-learning and self-adapting, the positive growth and adaptation depends on how well the system is adjusted with its environment. Some systems function mainly to support other systems by aiding in the maintenance of the other systems to prevent failure (Luhmann, 2018).

A system can be defined as an entity, which is a coherent whole such that a boundary is perceived around it in order to distinguish internal and external elements and to identify input and output relating to and emerging from the entity (Wilkinson, 2019). Broadly, there are two types of system; (a) open system and (b) closed system. Closed system theory originates from classical (Newtonian) physics of closed system thinking whereby few variables are tolerated in an observation so as to minimize the influence by external variables (Beven, 2019).

The closed system theory is attributed to Norbert Wiener, a distinguished mathematician and engineer at Massachusetts Institute of Technology (MIT) who developed it in 1949 (Chikere & Nwoka, 2015). Open systems theory has its foundations in biology, particularly Darwin's work on the evolution of the species. The popular version of open systems theory is attributed to Ludwig Von Bertalanffy who in 1964 used the term 'general systems theory' to describe the main ideas and to distinguish them from closed systems thinking Chumba, 2018). The fundamental notion of general systems theory is

its focus on interactions. The system theory postulates that a single autonomous element is different from its behaviour when the element interacts with other elements (Hull, 2019).

Whereas closed systems use error-controlled regulation to eliminate external influence, open systems use anticipatory control since it is as a result of interaction with the environment that a system achieves a dynamic stability (Njue, Kyalo, Mulwa, & Mbugua, 2016). System theory is founded upon the principles that the subsystems are; open, focused, interrelated, continuously transforming inputs into outputs, flexible, responds to environment through feedback, brings about the equilibrium to the system and are coherent (Njue *et al.*, 2016). Consistent with this view Ludlow, and Otto (2018) indicate that in open systems there are exchanges of energy, matter, people, and information with the external environment. In closed systems there are no exchanges of information and matter, just exchanges of energy.

Systems theory focuses on the arrangement of and relations between the parts and how they work together as a whole. The way the parts are organized and how they interact with each other, determines the properties of that system. The behavior of the system is independent of the properties of the elements. This often referred to as a holistic approach to understanding phenomena (Chikere & Nwoka, 2015). Every organized enterprise does not exist in a vacuum. It is rather known to depend on its external environment which is a part of a larger system, such as the industry to which it belongs, the economic system and the society (Chikere & Nwoka, 2015). This theory was used to examine the role of project planning Monitoring and Evaluation on the performance of community water projects in Machakos County, Kenya.

Conceptual Framework

Conceptual framework is defined as a visual presentation of key variables, factors or concepts and their relationship among each other which have been or have to be studied in the research either graphically or in some other narrative form (Miles, Huberman, & Saldana, 2013). The model depicted below shows the relationship between the dependent and independent variables. The independent variables include M&E stakeholder involvement, M&E Planning review while the dependent variable is performance of water projects in Machakos County, Kenya
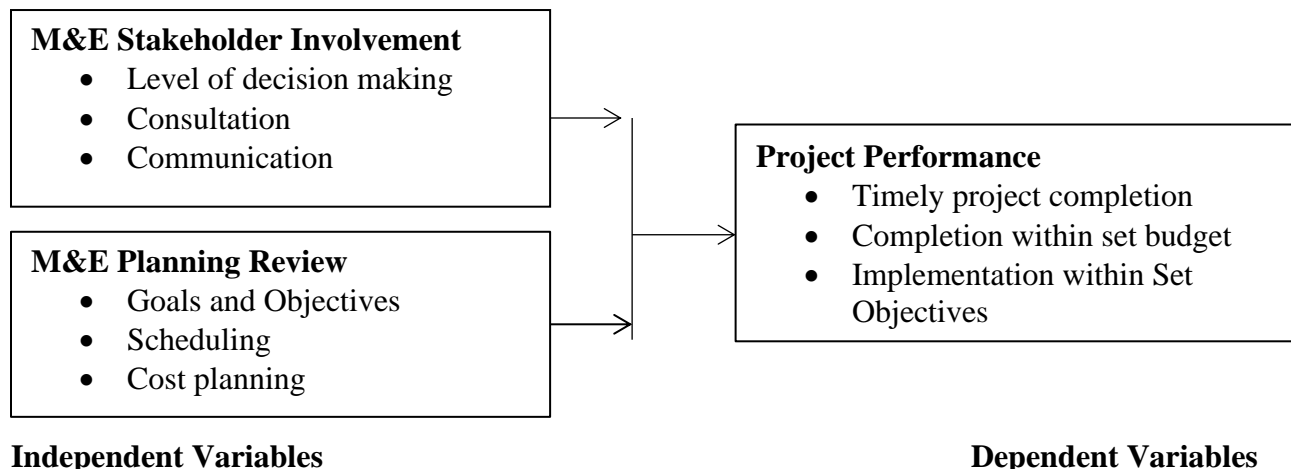
M&E Stakeholder Involvement
- Level of decision making
- Consultation
- Communication

M&E Planning Review
- Goals and Objectives
- Scheduling
- Cost planning

Project Performance
- Timely project completion
- Completion within set budget
- Implementation within Set Objectives

Independent Variables   **Dependent Variables**

Figure 2. 1: Conceptual Framework

M&E Stakeholder Involvement

Stakeholder involvement is a critical aspect of effective governance, decision-making, and project management. Stakeholders are individuals, groups, or organizations that have an interest, stake, or influence in a particular project, initiative, or organization. Involving stakeholders in the decision-

making process is essential for fostering collaboration, transparency, and ensuring that diverse perspectives are considered. Stakeholder involvement is crucial because it allows for a more comprehensive understanding of the complexities surrounding a project or decision. Engaging stakeholders provides access to valuable insights, expertise, and diverse viewpoints, which can contribute to better-informed and more robust outcomes. Involving stakeholders also promotes a sense of ownership and commitment, increasing the likelihood of successful implementation and sustainability (Otieno, 2018).

Stakeholder involvement can occur at various levels, ranging from information sharing to collaboration and empowerment. Informing stakeholders about decisions or developments is the most basic level, while collaboration involves active engagement and joint decision-making. Empowering stakeholders means giving them the authority to influence decisions and take an active role in the project or initiative. There are numerous methods for engaging stakeholders, including surveys, focus groups, town hall meetings, workshops, and collaborative decision-making forums. The choice of method depends on the nature of the project, the diversity of stakeholders, and the desired level of involvement. Effective communication is fundamental to successful stakeholder involvement, ensuring that information is shared transparently, and feedback is received and considered (Sahal & Bett, 2022).

M&E Planning Review

Effective project planning is foundational to project success. Begin by clearly defining the project's objectives and scope, ensuring that they are Specific, Measurable, Achievable, Relevant, and Time-bound (SMART). Conduct a thorough stakeholder analysis to identify key players and understand their interests and influence (Rumenya & Kisimbi, 2020). A comprehensive risk assessment helps identify potential challenges, allowing for the development of strategies to mitigate or manage risks effectively. Resource planning is a critical step, encompassing the identification and allocation of human, financial, and material resources. Develop a realistic budget to support project activities. A well-structured timeline with milestones, represented through tools like Gantt charts, provides a visual roadmap for project implementation. Establish a communication plan, specifying channels, frequency, and key messages to keep stakeholders informed (Tarindwa, 2019).

Quality assurance should be integrated into the planning phase, defining standards and criteria to uphold throughout the project. Lay the groundwork for monitoring and evaluation (M&E) by creating a framework and identifying key performance indicators (KPIs) to measure project success. Cost planning is a systematic and strategic process within project management that involves the estimation, allocation, and management of financial resources required to execute and complete a project successfully. It is a crucial component of project planning, ensuring that the project is financially viable, stays within budgetary constraints, and achieves its objectives without overspending (Okoth, 2016).

Empirical Review

M&E Stakeholder Involvement and Project Performance

Otieno (2018) conducted a study on the effect of stakeholder's involvement in strategy formulation and implementation on organizational performance, among tea warehousing companies in Mombasa County, Kenya. The new entrants constrain the subsector, prompting players to develop survival strategies that become the lifeline of their organization. The research attempted to establish the extent of stakeholder involvement in strategy formulation and implementation, and the effect that this had on organizational performance. Primary data collected indicate that stakeholder involvement had a strong positive correlation to performance. This is despite the fact that there was moderate stakeholder involvement in strategy formulation and implementation. Those organizations that had higher stakeholder involvement also had relatively higher performance index than those with lower

involvement. The study therefore concluded that there was an above average stakeholder involvement in strategy formulation and implementation among the tea warehousing firms in Mombasa County and this impacted on organizational performance.

Sahal and Bett (2022) conducted a study on the influence of stakeholder involvement on performance of Kenyan parliamentary service commission.Descriptive survey research design was used. The target population included eight hundred and five (805) respondents, including twenty (20) department heads and seven hundred and eighty-five (785) employees from PARLSCOM Job Group (Scale) 6 and above. To ensure that all cases have a representative sample, respondents were sampled according to their department using a stratified sampling method. Simple random sampling was used to select respondents. The sample size was 81 people. Questionnaires were used to collect primary data. Ten (10) respondents took part in the pilot study but did not participate in the final study. Content validity was used to assess the instruments' validity. Cronbach's alpha reliability coefficient was used to test the questionnaire's reliability, and the study aimed for a correlation coefficient of 0.7. Descriptive statistics: standard deviation and mean quantitative data analyzed and presented in tables, pie charts, and bar graphs in order to determine how variables relate, inferential statistics such as multiple regressions and correlation analysis were used. According to the findings of the study, stakeholder involvement has a positive and significant impact on the performance of the Kenyan Parliamentary Service Commission. The study concluded that stakeholder involvement helps to reduce risk within the firm, improves governance, and brings people together to pool expertise, experience, and knowledge. According to the study, the commission should have clear, consistent communication by ensuring that external and internal stakeholders understand the vision and their individual role in achieving an organization's goals.

Okoth (2016) investigated how stakeholder involvement influences organizational performance, strategy formulation, and implementation in Mombasa tea warehousing companies. Primary data collected revealed that stakeholder involvement was positively related to performance. This was true even when the participants were moderately involved in the formulation and implementation of the strategy. Performance indicators were higher for participating organizations more actively than those who did not.

Adewale and Esther (2018) investigated the relationship between organizational performance and stakeholder involvement in strategic planning. Venda University was investigated. It was found that the management unit was completely in control of the planning process, leaving some participants in the dust. According to these findings, there is little involvement of those directly involved in the planning process.

Chepkoech and Waiganjo (2015) investigated how stakeholders influenced strategic change implementation in Kenyan commercial banks. They are investigating the National Bank of Kenya. A descriptive research design was used, and 120 managers from Nairobi CBD NBK branches were chosen as respondents. Employees are promoted to various levels of the bank's management. Data was collected using a questionnaire. It was discovered that stakeholders played an important role in the implementation of Kenya's commercial banks' transformation strategy.

Ochunga (2016) examined the influence of stakeholder participation on sustainability of community development projects implemented by plan international in homa bay town sub-county. The study adopted a descriptive survey design. The researcher targeted three people in each of the 51 organizations partnering with Plan International; this gave a population of 153 people. Using Sekeran (2003) sample determination the sample size was determined as 113 respondents. Simple random sampling was used to select the 113 respondents. SPSS was used to randomize the names and pick 113 names. The study reached 103 respondents. The study used questionnaires for data collection. Pilot testing was done with 12 respondents from Rangwe Sub- County. Quantitative data was analyzed

using frequencies, percentages and cross-tabulation. Chi-square p-value was used to test the significance of relationships between the independent and the dependent. It was established that there was a weak and insignificant negative association between passive participation among stakeholders on and sustainability of community development projects r=0.043,p=0.666,CI=95%.It was also established that there was a moderate significant positive correlation between interactive participation among stakeholders on sustainability of community development projects r=0.365, p=0.000, CI=95%. A moderate significant positive correlation between the influences of functional participation among stakeholders on sustainability of community development projects was established =0.455, p=0.000, CI=95%.There was a moderate significant positive correlation between the influences of optimum participation among stakeholders on sustainability of community development projects r= 0.382, p=0.000, CI=95%.It was recommended that Plan International needs to reduce the extent of engaging stakeholder passively, enhance the extent of interactive participation, strengthen functional participation among stakeholders and reinforce optimal participation to enable greater efficiency and effectiveness of programming as well as accountability among the stakeholders, this will be an assurance for project sustainability.

Abdi, I. (2019) studied the influence of stakeholder's participation in performance of agricultural projects in Wajir County, Kenya: a case of Kenya climate smart agriculture project. The study utilized descriptive survey research design with a target population of 220 individuals drawn from the agriculture department of Wajir County government, project beneficiaries, implementing agencies, as well as service providers. The researcher arrived at a sample of 136 respondents using Krejcie & Morgan table. The study analyzed the data using SPSS statistical application and applied Descriptive design, specifically measures of central tendency was used to describe data. The researcher also used correlation and regression to determine the degree of relation between the dependent and independent variables. The study found that Stakeholder involvement in the project at initiation, execution and monitoring and evaluation has positive effect on project performance while participation during funding has negative effect to project performance. The study concludes that the effect of stakeholder participation on project performance is determined by the skills of the stakeholder on the subject matter. If it is technical like involvement at funding level the impact is likely to be negative. While it will be positive for non-technical aspects,the study recommended that stakeholders be trained on the subject matter before involving them and implementing agencies should be flexible to accommodate stakeholder input. The study recommends further investigation on other factors that influence project performance other than stakeholder participation.

M&E Planning Review and Project Performance

Mwanza, Namusonge and Makokha (2020) researched on the influence of project planning practice on performance of construction projects in Kenya. The study adopted a mixed research design which included descriptive survey, census and correlation. The target population was 1761 respondents with a sample size of 313 respondents comprised of 160 managers of Early Childhood Development Education, 11 managers of county polytechnics, 133 stall managers and 9 managers of county modern markets. The study is of significance to policy makers, county governments and academicians. The study found out that project planning practice and project stakeholders' practice had a negative significant influence on performance of construction projects. The study also found out that planning gives direction to the activities to be performed in time and reduces mistakes.

Wafula, Makokha and Namusonge (2019) researched on the effect of project planning on performance of CDF health facilities construction projects in Trans-Nzoia county Kenya. A descriptive design was used. A combination of Stratified and Purposive sampling techniques was used to draw the respondents who are directly linked to the construction projects, and they included the Health Facility In charge of the facilities, the Public Health Officers, the Contractor on site, the Health Facility Committee members representing the community who are the major stakeholders of

the projects. Self-administered structured and semi structured questionnaires were used to collect both quantitative and qualitative data. Findings conclusively indicate that timely project completion, cost estimation and stakeholders' satisfaction are key indicators that can be measured to judge the performance of projects especially the Government related projects, they can be related to a yardstick measure by any mwananchi awaiting to utilize the projects.

Kiiza and Muiruri (2022) investigated the influence of project planning process on performance of Food Sustainable Initiative Project in Rwanda. The concern of this study was to explore the influence of project planning process on performance of food sustainable initiative project in Rwanda. The specific objectives of the study included determining how schedule influences performance of food sustainable initiative project in Rwanda, to examine the influence of project execution on performance of food sustainable initiative project in Rwanda and to assess the influence of budget on performance of food sustainable initiative project in Rwanda. The study adopted descriptive research design using quantitative and qualitative approaches. To acquire primary data, structured questionnaires and interview procedures were used. Results from the findings indicated that there was an agreement on how schedule influences performance of the project.

Akuno and Wanyoike (2020) studied the influence of project resource planning on performance of elephant conservation at TSAVO National Park, Kenya. The aim of the study is to determine the influence of project resource planning on performance of elephant conservation at Tsavo National Park. The specific objectives of the study were to determine the influence of project resource planning on the performance of elephant conservation at Tsavo National Park. Two theories of resource-based theory and planning theory were used. From the study, it was revealed that resource planning affected performance of elephant conservation projects to a large extent.

According to the study by Tarindwa, (2019) the budget allocated for monitoring and evaluation activities can be delineated within the project budget to promote independence of the function. The budget should further be demarcated within the overall budget to enable independence of the monitoring and evaluation function (Bundi, 2020). M&E budget allocation and separation of such a budget from the main project is critical for founding sustainable M&E systems and, linking M&E to the project performance (IFAD, 2019). M&E budget needs to separate from the main project budget to promote independence of the M&E function as that has a positive influence on the performance of the project (Kaula, 2020). M&E budget allocation and timeous allocation are key success factors for the project Rumenya and Kisimbi (2020) asserts that budget allocation and timeous allocation of the budget determines what be achieved as far as monitoring and evaluation plan is concerned. Researchers established a positive and significant influence that the monitoring and evaluation-budget allocation has on the performance of the project.

In the study conducted by Mushori (2020) Budgetary allocation and timeous allocation were identified as key determinants of effective M&E practices that positively influence the performance of the project. Project success depended on M&E budget allocation. Budget allocated for monitoring and evaluation activities should be adequate to effectively implement the monitoring, and evaluation approved plan (Maalim, 2017). Failure to allocate sufficient budget for monitoring and evaluation activities compromises the ability to effectively implement the planned monitoring and evaluation activities and that increases probability of failure to monitor or evaluate the project (Molapo, 2019).

RESEARCH METHODOLOGY

Research Design

This study used descriptive research design. Mugenda and Mugenda (2003) explained the descriptive design as a process of collecting data in order to test a hypothesis or to answer the questions of the current status of the subject under study. Its advantage is that it is used extensively to describe behavior, values, attitude and character. The descriptive research design attempts to provide more

details and insights from the respondents on how the independent variables impact on the dependent variable. This descriptive research design enables the researcher to analyze the findings and draw informed conclusions.

Target Population

Target population is the entire set of individuals (or objects) having the same characteristics as pointed out in the sampling criteria used for the study (Bryman, 2013). The target population makes a part of the universal population (Creswell, 2019). The unit of analysis in this study comprised of 19 actors implementing the completed and on-going water projects in Machakos County (Appendix IV: List of Water Actors in Machackos County). The county has water projects that are complete, and others are ongoing. These projects are financed by the County Government, the National Government and international organizations and local non-governmental organizations. The unit of observation was Project managers, M&E officers, project officers/coordinators, technical staff, involved in the projects.

Table 3. 1: Target Population

Category	Target Population
Project managers	19
M&E officers	38
Project Supervisors/Cordinators	19
Technical staff	76
Total	152

Machakos County Ministry of Water department, 2024)

Sample size and Sampling Technique

The smallest portion of a population that adequately reflects the full group is called a sample (Saunders et al., 2019). Sampling is the process of selecting and analyzing a small number of persons, items, or events in order to determine a characteristic of the total population (Woods, 2015). According to Gay (2019) a sample of 10% is representative however he indicated that a sample more than 10% is better. No sampling procedures was utilized because the study used census methodology to collect data from the respondents. A census is a tally of all population elements, as per Kombo and Tromp (2013). When a population is sufficiently small, it is not necessary to sample (Kothari, 2014). Therefore, the study sample size was 152 respondents.

Table 3. 2: Sample Size

Category	Target Population	Sample Size
Project managers	19	19
M&E officers	38	38
Project Officers	19	19
Technical staff	76	76
Total	**152**	**152**

Data Collection Instrument

Data was collected using a self-administered semi-structured questionnaire. Semi-structured questionnaires were used since they enabled the researcher to collect quantitative data. Questionnaires are a good method because they provide clarifications sought by respondents and they can be collected immediately after they are completed. Structured questionnaires are easy to administer, analyze and are economical in terms of time and money. A five-point Likert scale was used to

measure all variables. The lowest rating of 1 signifies a low opinion by respondent while a high rating of 5 signifies a high rating by the respondents.

Pilot Study

A pilot test was conducted to determine validity and reliability of the data collection instrument. A pilot study is a small experiment designed to test logistics and gather information prior regarding a larger study, in order to improve the latter quality and efficiency. A pilot study can reveal deficiencies in the design of proposed experiment and procedure, and these can be addressed before time and resources are expended on large scale studies. The responses from respondents were used to adjust and refine the questionnaire accordingly. According to Mugenda and Mugenda (2017) the pretest sample should be between 1% and 10% depending on the sample size. In this study, the pilot group was 15 individuals which represented 10% of the total study sample size.

Data Analysis and Presentation

Data obtained from the field were coded, cleaned, and entered into computer for analysis using the SPSS version 25. The data was summarized to see emerging trends and issues around specific themes, which are dependent on the variables and objectives. Presentation of data was done in the form of quantitative and qualitative reports which was presented in forms of tables and essay. For the quantitative reports, the tables consisted of mean and standard deviation values that were used to make interpretation of the analysis. Percentage, mean and standard deviation were used to show the frequency of responses. Tables were used to display the rate of responses and to facilitate comparison. Qualitative reports were presented in the form of essay which was discussed as per the study objectives aligned with the theories and empirical study.

Descriptive statistical included frequency, percentages, mean and standard deviation. Inferential statistical analysis used was multiple regression and correlation analysis. The significance of each independent variable was tested at a confidence level of 95%. To determine any causal relationship, multiple linear regression analysis was conducted.

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive statistics

M&E Stakeholder Involvement and Project Performance

The first specific objective of the study was to determine the role of M&E stakeholder involvement on the performance of community water projects in Machakos County, Kenya. The respondents were requested to indicate their level of agreement on various statements related to M&E stakeholder involvement and the performance of community water projects in Machakos County, Kenya. The results were as shown Table 4.1.

From the results, the respondents agreed that stakeholders from the local community actively participated in the planning phase of the water projects (M=4.095, SD= 0.896). In addition, the respondents agreed that decision-making processes include input from local government officials, ensuring alignment with broader development goals (M=3.900, SD= 0.876). Further, the respondents agreed that information dissemination mechanisms effectively keep community members informed about the project's progress, fostering transparency and accountability (M=3.887, SD= 0.782).

The respondents agreed that external agencies and non-governmental organizations (NGOs) play a significant role in supporting the implementation of the community water project, contributing resources and expertise (M=3.855, SD= 0.685). The respondents also agreed that regular feedback loops are established, allowing for continuous engagement with stakeholders at different stages of the water project (M=3.797, SD= 0.698). In addition, the respondents agreed that the project team proactively incorporates community preferences and needs into the design and execution phases,

enhancing the project's relevance and acceptance (M=3.771, SD= 0.727). Further, the respondents agreed that mechanisms are implemented to ensure the inclusion of marginalized or vulnerable groups in decision-making processes, promoting equity and social justice (M=3.687, SD=0.777).

Table 4. 1: M&E Stakeholder Involvement and Project Performance

	Mean	Std. Deviation
Stakeholders from the local community actively participated in the planning phase of the water projects	4.095	0.896
Decision-making processes include input from local government officials, ensuring alignment with broader development goals.	3.900	0.876
Information dissemination mechanisms effectively keep community members informed about the project's progress, fostering transparency and accountability.	3.887	0.782
External agencies and non-governmental organizations (NGOs) play a significant role in supporting the implementation of the community water project, contributing resources and expertise.	3.855	0.685
Regular feedback loops are established, allowing for continuous engagement with stakeholders at different stages of the water project.	3.797	0.698
The project team proactively incorporates community preferences and needs into the design and execution phases, enhancing the project's relevance and acceptance.	3.771	0.727
Mechanisms are implemented to ensure the inclusion of marginalized or vulnerable groups in decision-making processes, promoting equity and social justice.	3.687	0.777
Aggregate	**3.842**	**0.777**

M&E Planning review and Project Performance

The second specific objective of the study was to examine the role of M&E Planning review on the performance of community water projects in Machakos County, Kenya.The respondents were requested to indicate their level of agreement on various statements related to M&E Planning review and the performance of community water projects in Machakos County, Kenya. The results were as shown Table 4.2.

From the results, the respondents agreed that the project's objectives and scope are clearly defined at the outset, providing a foundation for effective planning and implementation (M=4.040, SD=0.772). In addition, the respondents agreed that stakeholder analysis is conducted to identify key individuals and groups, ensuring their perspectives were considered in the project planning process (M=3.840, SD=0.889). Further, the respondents agreed that a comprehensive risk assessment is undertaken to identify potential challenges, and strategies are developed to mitigate or manage risks effectively (M=3.827, SD=0.768). The respondents also agreed that resource planning is conducted, and necessary resources are allocated to support project activities (M=3.800, SD=0.562).

As shown in the results, the respondents agreed that a detailed project timeline with milestones is developed, providing a visual representation of key project activities and deadlines (M=3.743, SD=0.879). In addition, the respondents agreed that the communication plan effectively facilitates information flow among stakeholders, specifying channels, frequency, and key messages (M=3.708, SD=0.692). Further, the respondents agreed that quality assurance measures, including defined standards and criteria, are implemented to monitor and maintain the quality of project deliverables (M=3.688, SD=0.760).

Table 4. 2: M&E Planning review and Project Performance

	Mean	Std. Deviation
The project's objectives and scope are clearly defined at the outset, providing a foundation for effective planning and implementation.	4.040	0.772
Stakeholder analysis is conducted to identify key individuals and groups, ensuring their perspectives were considered in the project planning process.	3.840	0.889
A comprehensive risk assessment is undertaken to identify potential challenges, and strategies are developed to mitigate or manage risks effectively.	3.827	0.768
Resource planning is conducted, and necessary resources are allocated to support project activities.	3.800	0.562
A detailed project timeline with milestones is developed, providing a visual representation of key project activities and deadlines.	3.743	0.879
The communication plan effectively facilitates information flow among stakeholders, specifying channels, frequency, and key messages.	3.708	0.692
Quality assurance measures, including defined standards and criteria, are implemented to monitor and maintain the quality of project deliverables.	3.688	0.760
Aggregate	**3.792**	**0.760**

Inferential Statistics

Inferential statistics such as correlation analysis and regression analysis were used to assess the relationships between the independent variables (M&E stakeholder involvement and M&E Planning review) and the dependent variable (performance of community water projects in Machakos County, Kenya).

Correlation Analysis

This research adopted Pearson correlation analysis determine how the dependent variable (performance of community water projects in Machakos County, Kenya) relates with the independent variables (M&E stakeholder involvement and M&E Planning review).

Table 4. 3: Correlation Coefficients

		Project Performance	M&E Stakeholder Involvement	M&E Planning review
Project Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	137		
M&E Stakeholder Involvement	Pearson Correlation	.815**	1	
	Sig. (2-tailed)	.003		
	N	137	137	
M&E Planning review	Pearson Correlation	.825**	.327	1
	Sig. (2-tailed)	.002	.032	
	N	137	137	137

From the results, there was a very strong relationship between M&E stakeholder involvement and performance of community water projects in Machakos County, Kenya (r = 0.815, p value =0.003). The relationship was significant since the p value 0.003 was less than 0.05 (significant level). The findings are in line with the findings of Sahal and Bett (2022) who indicated that there is a very strong relationship between M&E stakeholder involvement and project performance.

Moreover, there was a very strong relationship between M&E Planning review and performance of community water projects in Machakos County, Kenya (r = 0.825, p value =0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings are in line with the findings of Mwanza, Namusonge and Makokha (2020) who indicated that there is a very strong relationship between project M&E planning review and project performance.

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (M&E stakeholder involvement and M&E Planning review) and the dependent variable (performance of community water projects in Machakos County, Kenya).

Table 4. 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.881[a]	.776	.777	.10472

a. Predictors: (Constant), M&E stakeholder involvement and M&E Planning review

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.776. This implied that 77.6% of the variation in the dependent variable (performance of community water projects in Machakos County, Kenya) could be explained by independent variables (M&E stakeholder involvement and M&E Planning review).

Table 4. 5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.028	2	6.014	107.39	.002[b]
	Residual	3.654	132	.028		
	Total	15.682	136			

a. Dependent Variable: performance of community water projects in Machakos County, Kenya
b. Predictors: (Constant), M&E stakeholder involvement and M&E Planning review

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 107.39 while the F critical was 2.440. The p value was 0.002. Since the F-calculated was greater than the F-critical and the p value 0.002 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of M&E stakeholder involvement and M&E Planning review on performance of community water projects in Machakos County, Kenya.

Table 4.6: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.331	0.084		3.940	0.001
M&E stakeholder involvement	0.386	0.097	0.387	3.979	0.000
M&E Planning review	0.376	0.095	0.375	3.957	0.001

The regression model was as follows:

$Y = 0.331 + 0.386X_1 + 0.376X_2 + \varepsilon$

According to the results, M&E stakeholder involvement has a significant effect on performance of community water projects in Machakos County, Kenya β_1=0.386, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings are in line with the findings of Sahal and Bett (2022) who indicated that there is a very strong relationship between M&E stakeholder involvement and project performance.

The results also revealed that M&E Planning review has a significant effect on performance of community water projects in Machakos County, Kenya $\beta1$=0.376, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the findings of Mwanza, Namusonge and Makokha (2020) who indicated that there is a very strong relationship between M&E Planning review and project performance.

Conclusion

The study concludes that M&E stakeholder involvement has a positive and significant influence on the performance of community water projects in Machakos County, Kenya. Findings revealed that joint decision making, consultation and clear communication influence the performance of community water projects in Machakos County, Kenya.

In addition, the study concludes that M&E Planning review has a positive and significant influence on the performance of community water projects in Machakos County, Kenya. Findings revealed that goals and objectives, scheduling and cost planning influence the performance of community water projects in Machakos County, Kenya.

Recommendations

The study recommends that the management of community water projects should implement regular stakeholder workshops that not only update participants on project progress but also solicit their feedback and input on current challenges and potential improvements. These workshops should include representatives from local communities, project beneficiaries, government officials, and other relevant partners

In addition, the study recommends that the management of community water projects should establish clear, measurable indicators of success and a detailed M&E plan during the initial planning stages. This plan should outline specific benchmarks for performance, data collection methods, and evaluation timelines, as well as allocate resources and responsibilities for ongoing monitoring

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