

Influence of monitoring and evaluation practices on performance of water projects in Iringa District Council, Tanzania

Ernest Godson¹

Ruth Gisayi²

¹godsonernest21@gmail.com

¹Institute of Accountancy Arusha, ²Medical Teams International, Tanzania

<https://doi.org/10.51867/ajernet.7.3.130>

ABSTRACT

The study aimed to analyse the influence of Monitoring and Evaluation (M&E) practices on the performance of water projects in Iringa District Council. Specifically, the study analysed the influence of M&E capacity building; Stakeholder involvement in M&E; and Utilization of M&E findings as the independent variables that influence the dependent variable (performance of water projects). This study was conducted in Iringa District Council, Iringa region, Tanzania. The performance based theory was used to guide this study. The targeted population for this study comprised all stakeholders involved in the planning, implementation, and monitoring of rural water projects in Iringa District Council. This study adopts a positivist philosophy. The study employed a deductive research approach, whereby an explanatory quantitative research design was adopted. The study employed stratified sampling approach to sample total of 392 respondents from the target population. The data was collected using questionnaires whereby descriptive and inferential analysis was performed using SPSS Version 27.0. In descriptive analysis frequencies, percentages and mean were performed and multiple linear regression analysis was conducted in inferential analysis. The study found that all three variables are important factors influencing performance of water projects in Iringa district council. The proxies of capacity building scored mean scores between 3.86 and 4.08. Also, the mean scores for stakeholder involvement in M&E ranged between 3.78 and 3.86, while utilisation of M&E findings had mean score above 4.00. Additionally, the study found that the M&E capacity building had the highest and statistically significant coefficients: its predictor was the strongest ($\beta = 0.412$, $t = 9.297$, $p < 0.001$), followed by stakeholders' involvement in M&E ($\beta = 0.324$, $t = 7.194$, $p < 0.001$), then utilisation of M&E findings which had a relatively lower coefficient ($= 0.196$, $t = 5.553$, $p < 0.001$). The study concludes that M&E capacity building, stakeholder involvement in M&E, and utilization of M&E findings all significantly contribute to the performance of water projects in Iringa District Council. Among the three factors, M&E capacity building was the strongest predictor of project performance, followed by stakeholder involvement and utilization of M&E findings. The findings therefore demonstrate that strengthening M&E skills and competencies, promoting active stakeholder participation, and ensuring the timely use of M&E findings for decision-making are essential for improving the performance and sustainability of water projects. The study recommends that Iringa Water Authority should improve M&E capacity building, involve all stakeholders in project monitoring and evaluation and also, there should be effective use of M&E findings to ensure effective performance of water projects.

Keyword: Monitoring, Evaluation, Performance, Tanzania, Water Projects

I. INTRODUCTION

Water performance has been described as a pressing global issue, which can be attributed to human health, economic growth and environmental stability. Water project performance refers to the extent to which a project achieves its intended objectives within the planned scope, budget, schedule, and quality standards while delivering sustainable benefits to beneficiaries (Project Management Institute [PMI], 2021). The performance of water resource management is required to guarantee equitable access to clean water to be used in domestic, agricultural, and industrial practices (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2023). However, in most developing countries, water scarcity, inadequate infrastructure, and unenlightened project management are major hindrances to long-term performance (Masombe & Omwenga, 2020). The United Nations (UN) report show that 2.2 billion people in the world have no access to safely managed drinking water, which testifies to the vital importance of the increased mechanisms of its management and performance (UN, 2022). The situation is the most severe in rural and developing areas where water infrastructure relies more on foreign investment and donor-driven initiatives with poor M&E structures (Minyiri & Muchelule, 2018). In African countries, scarcity of water is a serious problem, approximately 408 million lived in Sub-Saharan Africa do not have access to clean, renewable water (UNESCO, 2023). The study by Wegoro (2023) indicated that most of the water projects that are being implemented in Africa do not last more than five years due to use of improper maintenance, lack of integration of M&E, and poor stakeholder engagement.

Empirical evidence demonstrates that effective monitoring and evaluation (M&E) systems contribute to improved performance and sustainability of water projects. For example, Nzamwita and Sikubwabo (2023) found that M&E planning, technical capacity, resource allocation, and stakeholder participation significantly influence the performance of water supply projects. Similarly, Mgoba and Kabote (2020) established that participatory monitoring and evaluation enhances the achievement of community-based water projects in Tanzania, highlighting the importance of stakeholder involvement and systematic monitoring. These findings suggest that well-designed M&E systems provide timely information for tracking implementation progress, identifying deviations, supporting corrective actions, and improving project outcomes.

On the other hand, studies across African countries have identified weak monitoring and evaluation (M&E) systems, inadequate stakeholder participation, limited technical capacity, weak institutional arrangements, and insufficient operation and maintenance financing as important constraints to the performance and sustainability of water projects. In Zimbabwe, Kativhu et al. (2017) found that institutional factors, community participation, user committees, and the availability of operation and maintenance funds were critical determinants of the sustainability of rural water facilities. Similarly, evidence from South Africa indicates that appropriate operation and maintenance arrangements are significantly associated with the functionality and continuity of rural small-scale water infrastructure (Selala et al., 2019). In Kenya, inadequate maintenance practices, shortages of spare parts, and limited technical training were identified as major contributors to the non-functionality of mechanized water-supply systems (Kitetu & Ngige, 2015). In Tanzania, Mgoba and Kabote (2020) further demonstrated that participatory monitoring and evaluation contributes to the achievement of community-based water-project objectives, emphasizing the importance of strengthening community capacity and participation in project management. Collectively, these findings indicate that the performance and sustainability of water projects in Africa depend not only on infrastructure development but also on effective M&E, meaningful stakeholder participation, institutional capacity, and adequate long-term operation and maintenance arrangements.

In Tanzania, the performance and sustainability of water projects continue to be affected by implementation challenges, including construction delays, cost overruns, poor-quality infrastructure, inadequate maintenance, low functionality, and unreliable water services to intended beneficiaries (Controller and Auditor General [CAG], 2023). These challenges are closely associated with weaknesses in monitoring and evaluation (M&E) practices, particularly inadequate tracking of project progress, limited stakeholder participation, insufficient technical capacity, weak follow-up of identified implementation problems, and ineffective use of M&E information for corrective decision-making. Evidence from Tanzania shows that participatory M&E enhances the achievement of community-based water projects by strengthening stakeholder involvement, accountability, and project oversight (Mgoba & Kabote, 2020), while evidence from water-supply projects in Rwanda demonstrates that effective M&E planning, technical capacity, resource allocation, and stakeholder participation significantly contribute to improved project performance (Nzamwita & Sikubwabo, 2023). Therefore, persistent challenges in the implementation and sustainability of water projects in Tanzania may partly reflect inadequate M&E practices that limit the timely identification of implementation deviations, corrective action, learning, and informed resource allocation, thereby undermining project performance and the sustained delivery of reliable water services.

Despite of the various studies that explored performance of water projects, many studies have examined technical, financial, and policy aspects of water project performance, and they have paid limited attention to the role of M&E in ensuring long-term functionality. Existing literature recognizes the importance of M&E but offers little empirical evidence on how its components such as human resource capacity, stakeholder involvement, and utilization of M&E findings influence project performance outcomes. This gap provides the rationale for the present study, which investigates how M&E practices influence the performance of water projects in Iringa District Council and seeks to generate practical recommendations for strengthening water project governance in Tanzania.

1.1 Research Objectives

- i. To examine the influence of capacity building in M&E on performance of water projects in Iringa District Council
- ii. To determine the influence of stakeholder involvement in M&E on performance of water projects in Iringa District Council
- iii. To examine the influence of utilization of M&E findings on performance of water projects in Iringa District Council

II. LITERATURE REVIEW

2.1 Theoretical Underpinning

2.1.1 Performance Theory

This study was guided by performance theory which was developed by Richard Schechner (2003). Although the theory originated in the field of performance studies, its principles have been widely adapted in organizational and management research to explain how planned actions, continuous monitoring, feedback, and improvement contribute to achieving desired outcomes. The theory views performance as the execution of activities or behaviors designed to accomplish predetermined goals and emphasizes that performance is a continuous process that can be monitored, assessed, and improved over time (Schechner, 2003). According to this theory performance is not simply the final outcome but also encompasses the processes, actions, and interactions through which objectives are achieved. Performance is influenced by the quality of planning, execution, supervision, feedback, and learning throughout the implementation process. This perspective suggests that organizations and projects perform better when their activities are continuously monitored, evaluated, and refined based on evidence generated during implementation.

This theory implies that effective monitoring and evaluation enhance performance by ensuring that project activities are implemented within the planned scope, budget, and schedule while meeting the expected quality standards. Monitoring provides continuous information on project implementation, enabling managers to detect deviations from project plans and take timely corrective measures. Evaluation complements monitoring by assessing the effectiveness, efficiency, relevance, impact, and sustainability of completed or ongoing project activities. Consequently, water projects with effective M&E systems are expected to achieve better performance in terms of timely completion, cost efficiency, service quality, beneficiary satisfaction, and long-term sustainability. Performance Theory pays limited attention to organizational, institutional, and environmental factors, such as stakeholder participation, resource availability, governance, and policy frameworks, which significantly influence the implementation and performance of water projects. As a result, the theory alone cannot comprehensively explain the complex factors affecting water project performance in Tanzania.

2.2 Empirical Review

2.2.1 The Influence of Capacity Building in M&E on Performance of Water Projects

Herman (2023) examined the impact of M&E practices on the performance of water-supply projects in Dodoma City Council, Tanzania. The study specifically assessed the contribution of skilled human resources in M&E, M&E planning, financing strategies, and community participation. The findings showed that skilled human resources in M&E had a statistically significant positive relationship with water-project performance ($\beta = 0.960, p < 0.05$), while M&E planning and financing strategies were also significant. These findings suggest that capacity building is an important mechanism through which M&E systems contribute to project performance because competent M&E personnel are better positioned to collect, analyse, interpret, and communicate project information for timely decision-making. However, the study considered capacity primarily through skilled human resources and did not comprehensively examine dimensions such as continuous training, mentoring, knowledge sharing, and technical support. This creates an opportunity for the present study to provide a more comprehensive assessment of M&E capacity building and water-project performance.

Mgoba and Kabote (2020) investigated the effectiveness of participatory M&E in achieving community-based water-project objectives in Tanzania. Although the study focused more broadly on participatory M&E, its findings provide important evidence concerning capacity building. The study found that 51.7% of respondents reported that water-project objectives had been achieved, but capacity building was one of the objectives that was not adequately achieved. The authors therefore recommended strengthening capacity building among local communities to enable them to manage water projects effectively, particularly when external project support is withdrawn. This finding demonstrates that effective M&E is not simply dependent on monitoring tools and procedures; it also requires people with adequate knowledge and skills to undertake monitoring, interpret findings, and use evidence for project management. Nevertheless, the study did not directly estimate the statistical effect of M&E capacity building on overall project performance, leaving a methodological gap that subsequent studies can address.

Nzamwita and Sikubwabo (2023) examined the effect of M&E on the performance of water-supply projects in Gakenke District, Rwanda. The study included M&E technical capacity as one of its explanatory variables alongside M&E planning, resource allocation, and stakeholder participation. The findings indicated that M&E technical capacity had a positive and statistically significant effect on project performance ($\beta = 0.968, p = 0.001$). This result suggests that technically competent personnel can strengthen project performance by improving monitoring procedures, identifying implementation deviations, supporting corrective action, and providing reliable information to project managers. The study is particularly relevant to water projects because it directly links technical M&E capacity with water-supply project performance. However, the Rwandan context differs institutionally from Tanzania, and the study concentrated on

technical capacity rather than the broader concept of capacity building involving training, mentoring, knowledge sharing, and institutional support. Therefore, empirical evidence from Tanzania remains necessary.

2.2.2 The Influence of Stakeholder Involvement in M&E on Performance of Water Projects

Kwikima (2025) conducted a mixed-methods study on Integrated Water Resource Management (IWRM) practices in Tanzania. The findings revealed limited participation of communities and local organizations in planning, with government retaining most decision-making powers. Key activities such as river flow monitoring, law enforcement, and financial management were inadequately performed. Although the study did not directly address M&E, it underscored the importance of building capacity for effective water resource management. This insight aligns with the current study's focus on the role of capacity-building in M&E practices and performance of water projects. Mgoba and Kabote (2020) explored Tanzania's goal of achieving 90 percent access to safe drinking water by 2025 and highlighted the underdevelopment of participatory monitoring and evaluation (PM&E) in community water projects. Their study revealed that while over half of the respondents reported project objectives were achieved, capacity-building remained a major gap. NGO-funded projects performed better than government ones, and respondents generally rated PM&E as highly effective in meeting project goals. Although the study demonstrated the importance of PM&E, it did not assess the long-term continuity of water services or link PM&E intensity to performance indicators such as pump functionality over time.

Yahaya et al. (2025) examined stakeholder engagement in the planning and monitoring of water-supply projects at Songea Water Supply and Sanitation Authority (SOUWASA), Tanzania. The study involved 91 staff, community representatives, and local government officials and assessed stakeholder participation, communication mechanisms, and conflict resolution. The findings revealed that stakeholder participation significantly influenced project performance at the 5% level. The study further established that effective stakeholder engagement improved coordination, reduced implementation delays, and enhanced alignment between project objectives and community needs. However, the qualitative findings indicated that stakeholder engagement was sometimes inconsistent because of declining stakeholder interest, weak communication, and competing priorities. The authors therefore emphasized that stakeholder involvement should be continuous and inclusive throughout the project lifecycle rather than being limited to selected stages of implementation (Yahaya et al., 2025)

2.2.3 The Influence of Utilization of M&E Findings on Performance of Water Projects

Mgoba and Kabote (2020) examined the effectiveness of participatory monitoring and evaluation (M&E) in achieving community-based water projects in Tanzania. The study demonstrated that M&E becomes more valuable when information generated through monitoring is actually used by project stakeholders to guide decision-making and corrective actions. The findings showed that participatory M&E contributed to the achievement of water-project objectives by enabling communities and project implementers to identify implementation challenges, assess progress, and take appropriate actions. The study further emphasized that M&E findings should be communicated to and used by project stakeholders rather than being produced merely for reporting purposes. This suggests that the utilization of M&E findings can improve water-project performance by facilitating evidence-based decision-making, timely corrective measures, and accountability. However, the study focused primarily on participatory M&E effectiveness and did not independently measure the statistical influence of utilization of M&E findings on project performance, leaving an empirical gap for the present study (Mgoba & Kabote, 2020).

Kusek and Rist (2004) emphasized that results-based M&E systems are intended not simply to generate information but to ensure that evidence is used to improve public-sector decision-making and development results. Their framework demonstrates that M&E findings can inform planning, budgeting, resource allocation, programme modification, and accountability. In water projects, for example, monitoring findings on construction progress, financial expenditure, functionality of water infrastructure, community satisfaction, and achievement of project targets can be used to identify deviations and initiate corrective measures. Consequently, utilization of M&E findings provides a mechanism linking M&E activities to actual project performance. The relevance of this perspective to contemporary water projects is that the effectiveness of an M&E system should ultimately be judged by whether its findings influence managerial and operational decisions. However, because Kusek and Rist provides a general results-based framework rather than a water-sector-specific empirical test, this study is still needed to establish the magnitude of this relationship in Tanzania.

Kapuya et al. (2024) found that stakeholder participation in health-facility governing committees can strengthen social accountability when community representatives are able to participate meaningfully in oversight and decision-making. Although the study was conducted in the health sector rather than water projects, its findings are relevant to water-project governance because both sectors depend on decentralized structures, community participation, information sharing, and local accountability. The study suggests that information generated through monitoring is more likely to contribute to performance when stakeholders have opportunities to review, discuss, and act upon that

information. Therefore, utilization of M&E findings can be understood not merely as receiving reports, but as using evidence for decision-making, corrective action, resource allocation, accountability, and improvement of project implementation.

III. METHODOLOGY

3.1 Research Design

The study adopted an explanatory quantitative research design. This design is suitable for studies that seek to establish cause-and-effect relationships among variables. In this study, the explanatory design was used to assess how independent variables M&E capacity building, stakeholder involvement in M&E, and utilization of M&E findings influence the dependent variable, performance of water projects. The design minimizes bias and enhances reliability by relying on statistical analysis to test hypotheses and draw conclusions on the causal linkages between M&E practices and project outcome (Creswell & Creswell, 2018). A quantitative research approach was employed because it allows the researcher to test the direction and strength of causal relationships among variables, thereby ensuring objectivity and generalizability of results (Saunders, et al., 2019).

3.2 Study Area

The study was conducted in Iringa District Council, Iringa region, Tanzania. The district was chosen because it expanded water performance requirements and established several rural water projects through its Payment by Results program. This research examines 13 water projects operating in the 11 Iringa villages of Mwambao, Ikengeza, Igingilanyi, Kihorogota, Kitapilimwa, Mboliboli, Idodi, Migoli, Chamdindi, Mbugani, and Mfyome. Through the implemented initiatives, 20,417 users rely on these water systems to fulfil their daily needs. The chosen projects within these villages satisfied research requirements because they are directly connected to the government's official rehabilitation and improvement programs.

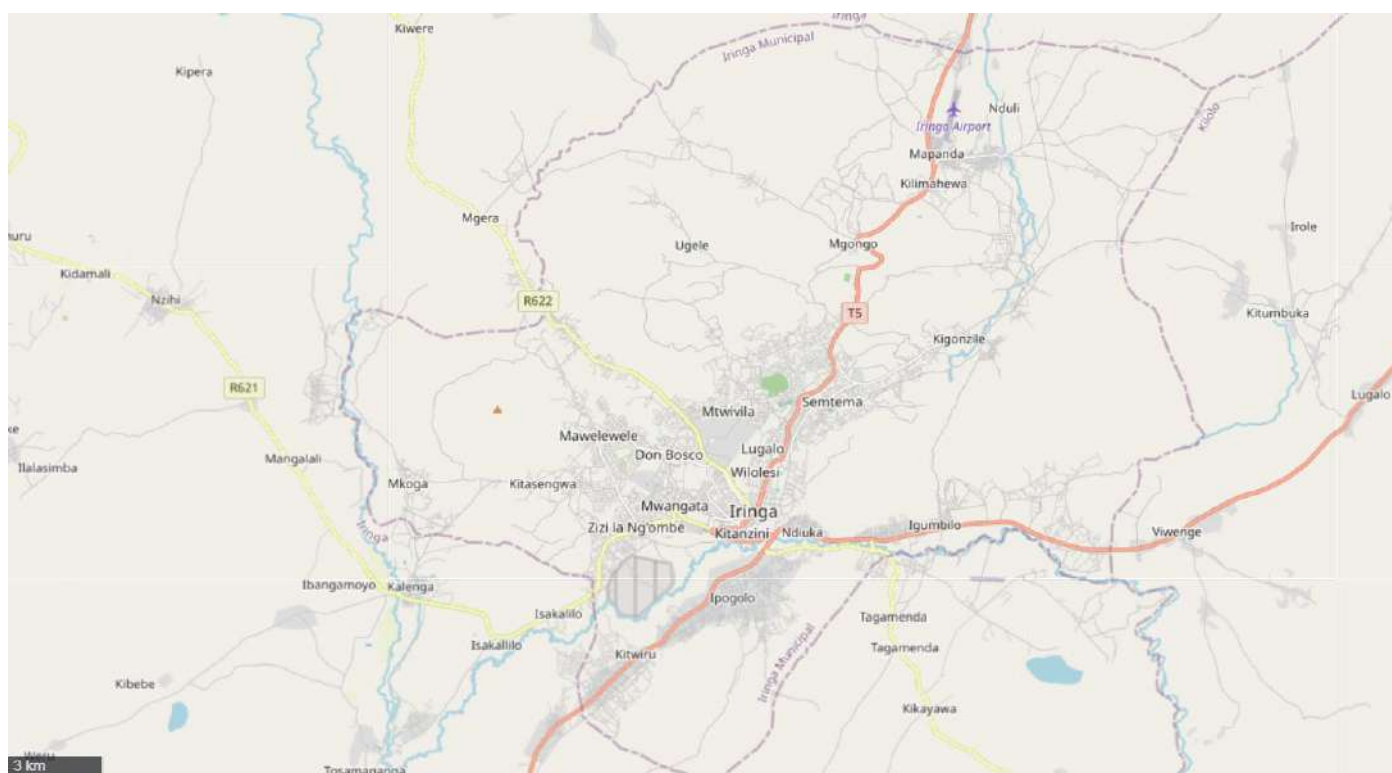


Figure 1
A Map for Iringa District Council

3.3 Target Population

The study targeted a total population of 20,417 comprising all stakeholders involved in the planning, implementation, and monitoring of rural water projects within Iringa District Council. Specifically, this includes officials from the Rural Water Supply and Sanitation Agency (RUWASA) at the district level, local government water department officers, members of Community-Based Water Supply Organizations (CBWSOs), ward and village water committee members, and community beneficiaries who directly depend on water projects for their daily needs.

3.4 Sampling and Sample Size

From the target population of 20,417, stratified sampling was employed to select the sample size using Yamane formula. The Yamane's formula is expressed as following:

$$n = \frac{N}{1 + N(e)^2}$$

Whereby:

N = Targeted population (20,417)

n = Sample size

e = margin of error (5%)

$$n = \frac{20,417}{1 + 20,417 * (0.05 * 0.05)}$$

$$n = \frac{20,417}{52.042} = 392$$

Therefore, the minimum sample size for this study was 392 respondents

3.5 Data Collection Instruments and Procedures

The study collected quantitative data using questionnaires. The questionnaires were feature closed-ended items using 5-point Likert-scale format. The questionnaires were pre-tested through a pilot study involving 30 participants drawn from a comparable institution to ensure reliability and validity of the instruments. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy returned a value of 0.774, which exceeds the recommended threshold of 0.70, confirming that the data were suitable for factor analysis and subsequent parametric testing. Shapiro-Wilk normality tests confirmed approximate normality of the data distributions.

3.6 Data Analysis

The study used SPSS version 27 to performed descriptive statistics such as frequencies, percentages and mean to summarize the results. Furthermore, the study used multiple linear regression analysis to find out how the combined and individually the three independent variables, taken together, predict performance of water projects. The following is the model that was used in the study

General equation:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$$

Model Applied:

$$PWP = \beta_0 + \beta_1CB + \beta_2SI + \beta_3UR + \epsilon$$

Whereby

PWP = Performance of Water Projects

CB= M&E Capacity Building

SI= Stakeholder Involvement in M&E

UR= Utilization of M&E Results

3.7 Ethical Consideration

Prior to data collection, ethical approval was obtained from Iringa District Council, and informed consent was obtained from all participants. Participation was voluntary, with confidentiality, anonymity, and the right to withdraw ensured throughout the study.

IV. FINDINGS & DISCUSSION

4.1 Demographics of the Respondents

Although the study targeted 392 respondents, 387 completed and returned the questionnaires, representing a response rate of 98.7%. This response rate is sufficiently high to provide an adequate basis for statistical analysis and does not substantially affect the representativeness or reliability of the study findings. In table 1 finding show that 67.2% of respondents are between the age groups of 31 and 50, indicating that the sample is dominated by the aged and economically active population of Iringa district council. This population offered a high level of reliability and experience to the data. The aged population tends to have the historical background that would allow them to properly evaluate the performance of water projects. The study also found that out of 387 respondents, male was 44.4% (172) and female were 55.6% (215) which were the majority participants in the study. An over-represented number of women

participants is vital in a study about water projects. Women in the rural setting of Tanzania are the responsible for household's water management and main beneficiaries of water projects introduced. This makes them the key informants to the project performance as determined by service reliability and user satisfaction.

The results in table 1 further show that 48% of respondents had secondary or technical education which is essential to the conceptual richness of the study in which the concepts of monitoring and evaluation demand moderate level of literacy and understanding of organised and formal systems. This educational profile would make the most respondents competent to know and report properly on basic aspects of M&E. The study also found that majority of clustering of the sampled (71.4%) were members of water committees and beneficiaries of the projects, this confirms that collected data was user-centric and aligned to participatory approach of M&E. The water committees and beneficiaries have direct responsibility of running and maintaining the projects, therefore, their feedback played key roles in determining the effectiveness of the community involvement and the long-term performance of the project. The results indicate that cumulatively, most of the respondents (61.8%) had between 1 to 2 years' experience with water projects in Iringa district. This implies that the water project sampled in Iringa Council is either new or has gone through a significant maintenance work which is normally done at optimal levels. Moreover, lower presence of respondents with more than 3 to 5 years means that period is where the majority of the water projects are failing.

Table 1

Demographics of the Respondents

Demographic dimensions	Elements	Frequency (N)	Percent (%)
Age group	below 24	4	1.0
	25-30	90	23.3
	36-40	161	41.6
	41-50	99	25.6
	50 and above	33	8.5
	Total	387	100.0
Sex	Male	172	44.4
	Female	215	55.6
	Total	387	100.0
Education level	Informal education	47	12.1
	Primary education	90	23.3
	Secondary/TVET education	186	48.1
	Undergraduate	49	12.7
	Postgraduate	15	3.9
	Total	387	100.0
Respondent's Villages	Mwambao	58	15.0
	Ikengeza	39	10.1
	Igingilanyi	35	9.0
	Kihorogota	35	9.0
	Kitapilimwa	26	6.7
	Mboliboli	38	9.8
	Idodi	30	7.8
	Migoli	32	8.3
	Chamdindi	30	7.8
	Mbugani	29	7.5
	Mfyome	35	9.0
	Total	387	100.0
Respondent's Occupation	Project Manager	30	7.8
	Village Government Leader	36	9.3
	Water Committee Member	131	33.9
	Community Beneficiary	145	37.5
	Other (Please Specify):	45	11.6
	Total	387	100.0
Experience in water projects	"Less than 1 year"	108	27.9
	"1-2 yrs"	131	33.9
	"3-4 yrs"	83	21.4
	"5+ yrs"	65	16.8
	Total	387	100.0

4.2 Descriptive Results

The study assesses the influence of Monitoring and Evaluation Practices on the Performance of water projects in Iringa District, Tanzania. The M&E practices were analysed based on M&E capacity building, stakeholders' involvement and Utilization of M&E findings. The 5-points Likert scale was used to score extents of individuals on M&E practices towards performance of water projects ranging from 1— indicating strongly disagree, 2—disagree, 3—neutral, 4—agree, and 5—strongly agree. The mean score was used to conclude the extent of M&E practices on the performance of the water projects.

4.2.1 Influence of M&E Capacity Building on Performance of Water Projects

Findings on the influence of M&E capacity building in Table 2 revealed that the mean score for “Project staff with technical expertise necessary to carry out M&E” was 4.05. This means that respondents agreed that staff with technical expertise in M&E is important to ensure performance of water projects. This is an important aspect of project management, as it ensures that project staff have the necessary expertise to collect, analyse, and interpret data that will inform project decision-making. The findings validated by Ogunbayo et al. (2024) who identified a positive correlation between M&E and professional competence in project implementation

Table 2

Influence of M&E Capacity Building on performance of Water Projects

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
Project staff have technical expertise necessary to carry out M&E to ensure water project performance	98(25.4)	164 (42.4)	0 (0.0)	92(23.7)	33 (8.5)	4.05
The project identifies skilled personnel to carry out the M&E functions activities to ensure good performance of water projects	33(8.5)	6(1.5)	0 (0.0)	256(66.3)	92(23.7)	4.07
Project training need assessments are conducted to ensures the right skills are acquired to manage the M&E activities to ensure good performance of water projects	42 (10.8)	71 (18.3)	0 (0.0)	164 (42.4)	110(28.5)	4.03
The project's design is flexible to achieve better project results to ensure good performance of water projects	41(10.6)	73(18.9)	0 (0.0)	163(42.1)	110(28.4)	3.85

Further, results in Table 2 indicates that the mean score for “The project identifies skilled personnel to carry out the M&E functions activities to ensure good performance of water projects” was 4.07. This implies that the overall respondents believed that identification of skilled M&E personnel are determinants of the success of water projects. This result concurs with that of Njeri and Omwenga (2019), who emphasize the importance of skilled personnel in M&E and argue that skilled personnel are vital for ensuring data quality and reliability. Furthermore, findings in Table 3 revealed that the mean score for “Project training need assessment are conducted to ensures the right skills are acquired to manage the M&E activities to ensure good performance of water projects” was 4.03. This implies that there was an agreement among the individuals responsible for implementing the project regarding whether the project training need analysis had successfully identified competent personnel to handle M&E tasks in water projects Findings concurred with Kwikima (2025), who emphasizes the need for project training need analysis to ensures the right skills are acquired to manage the M&E activities.

4.2.2 Influence of Stakeholders' Involvement in M&E on Performance of Water Projects

Findings on the influence of stakeholders' involvement in M&E on performance of water projects are shown in Table 3. The results revealed that the mean score for “stakeholder analysis is done to ensure all the stakeholders are involved in project monitoring” had a mean score of 3.85. This means that the respondents agreed. Stakeholder analysis is a process that identifies and analyses individuals, groups, or organizations that may affect or be affected by a project. It helps in understanding their interests, expectations, and potential impact on the project's success. Findings are supported by Mgoba and Kabote (2020), who found that project managers can identify potential conflicts, power dynamics, and communication channels among stakeholders by conducting a thorough stakeholder analysis.

Table 3*Influence of statehooders involvement in M&E on performance of water projects*

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
Stakeholder analysis is done to ensure all the stakeholders are involved in project M&E	6 (1.6)	308 (10.3)	7 (1.8)	308 (79.6)	26 (6.7)	3.85
Stakeholders feedback is well captured and analyzed to ensure proper project implementation	7(1.8)	125 (32.3)	13 (3.4)	202(52.2)	40(10.3)	3.86
Communication strategy is developed to address the flow of information in water projects	98(25.3)	26(6.8)	0 (0.0)	53(13.7)	210(54.2)	3.84
Participation of stakeholders reflects the community needs and stimulates people's interest in the implementation of projects	41(10.5)	45(11.7)	10 (2.6)	195(5.4)	96(24.8)	3.78

Findings in Table 3 also indicate that the mean score for “stakeholders feedback is well captured and analyzed to ensure proper implementation” was 3.86. This implies that the project implementers did not show any bias towards the feedback received from stakeholders, and they carefully analysed and considered all feedback before making decisions about the project’s implementation. Findings are supported by Bulle and Muchelule (2024), who found that stakeholders’ perceptions and opinions can significantly influence the success or failure of projects. Furthermore, findings in Table 3 reveal that the mean score for “communication strategy is developed to address the flow of information” was 3.84. This implies that the project implementers had a strong opinion on the communication strategy used to manage the flow of information during the project implementation. This result is in line with Mandara et al. (2013), who found that effective communication strategies were essential for addressing the flow of information during times of change, arguing for a well-designed communication strategy to help organizations overcome resistance to change, enhance employee engagement, and ensure successful project implementation.

Moreover, finding in Table 3 found that the mean score for “participation of stakeholders reflects the community needs and stimulates people’s interest in the implementation of projects” was 3.78. This means that the project implementers were positive and open to the involvement of stakeholders. This may align with the needs of the community and may foster interest among individuals in the M&E process. By allowing stakeholders to actively participate in the project, their perspectives and insights can be incorporated, resulting to more effective M&E practices. Findings are supported by Mgoba and Kabote (2020), who emphasized that stakeholder participation can enhance the legitimacy and credibility of M&E processes, thereby attracting more individuals to actively participate.

4.2.3 Influence of Utilization M&E Findings on Performance of Water Projects

Finding in Table 4 indicate that the mean score for “M&E findings are utilized to create new knowledge which ensure water project performance” was 4.00. This means that the project implementers were willing to utilize M&E findings before making decisions about the project’s implementation. Findings are supported by Kusek and Rist (2004) who found that M&E findings significantly influence the success or failure of the projects.

Table 4*Influence of Utilisation of M&E findings on Performance of Water Projects*

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
M&E findings utilized to create new knowledge which ensure water project performance	34 (8.7)	88(22.8)	0 (0.0)	167(43.1)	98 (25.4)	4.002
The new knowledge created through M&E guides decision making which promote water projects performance	33(8.5)	82(21.)	0 (0.0)	262(67.7)	10 (2.7)	4.007
M&E findings help to keep water project on tract to ensure good performance	42 (10.8)	68 (17.6)	0 (0.0)	167 (43.2)	110 (28.4)	4.08
M&E findings are used by external stakeholders to make decisions on issues related to water project to enhance performance	47(12.2)	73 (18.8)	0 (0.0)	169(43.6)	98(25.4)	4.06

Further, finding in Table 4 found that the mean score for “The new knowledge created through M&E guides decision making which promote water projects performance” was 4.00. This means that the project implementers had a strong opinion on the use of M&E knowledge created through M&E findings to manage the project implementation. This result is in line with Kusek and Rist (2004), who found that effective utilization of M&E findings was essential for effective performance of the projects, arguing that M&E findings can enhance employee engagement, and ensure successful project implementation.

Furthermore, findings in Table 4 found that the mean score for “M&E findings help to keep water project on track to ensure good performance” was 4.08. This means that the project implementers were positive and open on the influence of M&E findings in ensuring projects are on track. Findings are supported by Kusek and Rist (2004), who emphasized the use of M&E findings to ensure projects are on track and can enhance the legitimacy and credibility of M&E processes. Moreover, Results in Table 4 revealed that the mean score for “M&E findings are used by external stakeholders to make decisions on issues related to water project to enhance performance” was 4.06. This implies that the project implementers agreed that M&E findings are used externally for effective project performance.

4.2.4 Performance of Water Projects in Iringa District Council

The findings on project performance is indicated in table 5 below. The respondents disagreed that water projects were completed within the planned time schedule “The water project was completed within the planned time schedule” with Mean = 2.51. This suggests that many water projects experienced delays during implementation, which may have affected timely delivery of expected services to beneficiaries. Delays in project implementation are often caused by inadequate planning, procurement challenges, funding delays, and weak project supervision (Project Management Institute [PMI], 2021). Effective monitoring and evaluation practices can help identify schedule deviations early and facilitate corrective measures to improve project completion performance (Kusek & Rist, 2004). The results further show that respondents disagreed that water projects were implemented within the approved budget “The water project was implemented within the approved budget”, Mean = 2.54. This implies that some projects experienced financial challenges, including cost variations and inefficient resource utilization. Cost overruns in infrastructure projects are commonly associated with poor cost estimation, inadequate risk management, and weak financial control mechanisms (Flyvbjerg, 2014). Through regular financial monitoring and evaluation, project managers can improve budget control and ensure efficient use of available resources.

Table 5

The Performance of Water Projects

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
The water project was completed within the planned time schedule.	118 (30.5)	125(32.3)	10 (2.6)	98(25.3)	36(9.3)	2.51
The water project was implemented within the approved budget.	78(20.2)	189(48.8)	0 (0.0)	73(18.9)	47(12.1)	2.54
The completed water project meets the expectations and needs of the beneficiaries.	86 (22.2)	192(49.7)	8(2.0)	63(16.3)	38 (9.8)	2.43
The water infrastructure provided is of acceptable quality	97(25.0)	116 (30.0)	9(2.3)	80(20.7)	85(22.0)	2.85

The findings in Table 5 further indicate that respondents disagreed with the statement, “The completed water project meets the expectations and needs of the beneficiaries,” which recorded a mean score of 2.42. This suggests that respondents perceived some completed water projects as not fully addressing the expectations and priorities of their intended beneficiaries. Failure to adequately respond to beneficiaries’ needs may reduce user satisfaction, community ownership, and the likelihood of sustained use and management of water facilities. Harvey and Reed (2007) emphasize that meaningful community participation is an important prerequisite for sustainable rural water supply systems, particularly because community involvement enables users to contribute to decisions concerning the development and management of water services. Similarly, Mandara et al. (2013), in a study of rural water facilities in Tanzania, found that community management and capacity building are important considerations in the sustainability of rural water facilities. These findings suggest that effective M&E should not focus only on whether physical project outputs have been completed but should also assess whether the outputs adequately respond to beneficiaries’ needs and expectations.

Lastly, respondents disagreed with the statement, “The water infrastructure provided is of acceptable quality,” which recorded a mean score of 2.85. Although this was the highest mean score among the project-performance indicators reported in Table 5, it remained below the neutral point, indicating that respondents had concerns regarding the quality of the water infrastructure provided. Poor infrastructure quality can undermine the functionality, reliability,

and long-term sustainability of water services by increasing the likelihood of system failures and maintenance requirements. Evidence from developing communities demonstrates that systematic monitoring of water infrastructure is essential for assessing reliability and supporting sustainable management, while stronger management and performance monitoring can help prevent system failure (Ermilio et al., 2022). In the Tanzanian context, Awinia (2025) similarly found that technical sustainability and the quality of physical water infrastructure are important considerations for the sustainability of rural freshwater schemes. Therefore, the relatively low score for infrastructure quality highlights the need for M&E systems to incorporate regular assessment of construction quality, technical standards, functionality, and emerging infrastructure defects throughout project implementation.

4.3 Inferential Statistics Results

The collected data were coded and analysed using SPSS version 27 using multiple linear regression analysis (MLR). The study confirmed the model fitness to determine wellness of regression model in explaining the relationship between model's constructs, goodness of fit, determine predictability capacity of the model to explain observed value of the constructs. Table 6 indicated that regression output produced R-value of 0.770 (77%), also, the study found that R-square value was 592, showing that 59.2% of the variance in regression model is explained.

Table 6

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.770	0.592	0.589	0.48374	2.122

4.4 ANOVA Test

The study tested whether the model is statistically significant in predicting water project performance in Iringa district using ANOVA test, and the result is presented in Table 7. The result shows that F-statistics is 185.462 which is greater than mean square (43.399) as well as greater than 1, this indicates that the variance between means group. Also, the F-statistic had a smaller corresponding p-value ($p < 0.001$), which means the model has reached statistically significant value. Thus, it fit for the further analysis to determine the relationship between variables.

Table 7

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	130.198	3	43.399	185.462	0.000
	Residual	89.625	383	0.234		
	Total	219.823	386			

4.5 Regression Coefficients Results

The study employed multiple linear regression analysis to determine the relationship between independent variables (M&E capacity building; Participatory M&E; and Utilization of M&E findings) and the water project performance in Iringa district). The results in Table 8

Table 8

Coefficients Results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.532	0.157		3.387	0.001
	M&E capacity building	0.412	0.044	0.412	9.297	0.000
	Stakeholders Involvement	0.302	0.042	0.324	7.194	0.000
	Utilization of M&E Findings	0.176	0.032	0.196	5.553	0.000

The first objective was to assess the influence of M&E capacity building on the performance of water projects in Iringa district council. The regression result in Table 8 shows that M&E capacity building had Standardized Coefficients ($\beta = 0.412$, $t = 9.297$, $p < 0.001$), this means that M&E capacity building had a positive and significant relationship with the water project performance. The result implies that when other factors held constant, a one-unit improvement in M&E capacity building led to 0.412 unit increase to water project performance in Iringa district council.

Among three items, M&E capacity building had highest Standardized Coefficients (β) value (0.412). This confirms that M&E capacity building is the most critical predictor for the water project performance in study area.

The second objectives were to determine the influence of stakeholder involvement in ensuring performance of water projects in Iringa district council. The regression result in Table 8 shows that stakeholder involvement in M&E had Standardized Coefficients ($\beta = 0.324$, $t = 7.194$, $p < 0.001$), which show that stakeholder involvement in M&E had a positive and significant relationship with the water project performance. The result implies that when other factors held constant, a one-unit improvement in stakeholder involvement in M&E led to 0.324 unit increase to water project performance in Iringa district council.

The third objective was to assess the influence of utilization of M&E findings on the performance of water projects in Iringa district council. The regression result in Table 8 shows that utilization of M&E findings had Standardized Coefficients ($\beta = 0.196$, $t = 5.553$, $p < 0.001$), which show that utilization of M&E findings had a positive and significant relationship with the water project performance. The result implies that when other factors held constant, a one-unit improvement in utilization of M&E findings led to 0.196 unit increase to water project performance in Iringa district council. The Coefficients (β) value 0.196 means that utilization of M&E findings had least influential among the three items.

4.4. Discussion of Findings

Regression analysis has indicated that M&E capacity building is the most important and strongest predictor on performance of water projects in Iringa District ($\beta = 0.412$, $p < 0.001$). This observation means that the effectiveness of a water project is essentially integrated with the expertise and experience of those locally manage projects. The descriptive findings provide additional insight into the results, as all aspects of capacity building were rated highly.

This finding confirms the principles of performance theory, which assumes that the viability of any long-term project is determined by an effective management to provide balance between social, economic, and operational aspects. The absence of proficient individuals to oversee systems, perform maintenance, and coordinate resources makes this balance unattainable, which results in the high failure rates reported in the problem statement. The findings are in line with considerable empirical evidence. The findings validated the findings of Ermilio et al. (2022) who identified a positive correlation between M&E and professional competence. Also, it in line with a study of Njeri and Omwenga (2019) which shows that there is a direct correlation between human capacity and project performance. Moreover, it confirms the concern of Kwikima (2025) about the fact that major management tasks were not being performed satisfactorily in Tanzania, which illustrates a serious lack of capacity that this research confirms must be addressed.

The second most significant factor in performance of water projects was found to be stakeholder involvement in M&E ($\beta = 0.324$, $t = 7.194$, $p < 0.001$). This finding implies that the active engagement of the community is very important success factor. This means that community involvement will make the project seem to be part of the community rather than an external intervention, creating a feeling of ownership and local responsibility. The descriptive statistics shows that practical collaborative activities, such as training need analysis, joint field visits by community and project staff (Mean = 3.8605), were highly perceived by respondents, indicating such practical approach are more effective at establishing trust and engagement than formal committees.

This result clearly illustrated by the Performance Theory. The theory explains a causal process in which certain activities such as joint site visits contribute to intermediate outcomes, such as community ownership which consequently contribute to long-term impact (sustainable water supply). The results also align with the past studies. For example, findings agree with the findings of Mgoba and Kabote (2020) who rated participatory M&E as highly effective. Also, it aligns with a study of Awinia (2025) who found a strong positive relationship between community involvement in M&E and project outcomes. The uniformity of the finding in various previous studies shows that community involvement is a crucial factor in the performance of rural development projects such as water project in Iringa district council.

Lastly, the study assessed the influence of utilising M&E findings on the performance of water project in Iringa district council. The findings show that utilization of M&E findings was significant predictor on performance of water project ($\beta = 0.196$, $t = 5.553$, $p < 0.001$).

Although it was the least significant out of three variables, its statistical significance indicates that evidence-based decision-making is a significant aspect for the success of projects. The descriptive analysis has indicated high mean scores (all above 4.0). This indicates that M&E findings must be applied to inform corrective actions and continuous improvement of the project. Specifically, it observed that the importance of making project adjustments in line with M&E findings is the most significant element of data usage (Mean = 4.0853). The study confirmed the concept of performance theory that the feedback loop mechanism is key element to the adaptive management and keeping a project on track. The low influence of utilising M&E findings on the performance of water project shows that in the rural setting, the formal and data-driven component of M&E is less important than its underlying human component of capacity and participation.

This finding was empirically supported by various studies, Mgoba and Kabote (2020) demonstrated that the dissemination of monitoring outcomes enhances the project lifespan. This study contributed significant insights that, while use of data is critical, but its effectiveness depends on the presence of skilled human (capacity) and active community (involvement) that can process the data and act. This was emphasised by a study of Kwikima (2025) who found that capacity and engagement are preconditions that enable successful data usage.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study explored the influence of monitoring and evaluation practices on performance of water projects in Iringa District Council, the result revealed that all three variables, M&E capacity building, stakeholders' involvement in M&E and utilization of M&E findings had a positive and statistically significance influence on performance of water projects. Capacity building on M&E enhance equal participation of all stakeholders in monitoring and evaluation of water projects and involvement of community members and other stakeholders in the process of M&E enhances the effective implementation, transparency, and sustainability of water projects. Involvement of stakeholders in the project gives the beneficiaries an opportunity to share localised knowledge, track performance of the project services, and they also hold the implementers accountable to enhance stronger ownership and reduce abandonment of the project and the responsiveness and effectiveness of project can be enhanced when M&E findings are used in time to inform planning, budgeting, and operational decisions. The effective use of M&E findings assists managers of projects to spot defects at the initial stage, manage resources, and take remedial actions before the situation worsens. These findings highlight the need to embed M&E practices throughout in the implementation process of water projects to ensure transparency, effectiveness and efficiency utilization of resources.

5.2 Recommendations

The study recommends that Iringa District Council, through the Ministry of Water and RUWASA, to institutionalise the capacity building programmes on all the M&E staff engaged in the implementation of the water projects. Such programmes are to incorporate both technical and managerial aspects, for example, data analysis, reporting standards, evaluation design, and application of digital monitoring tools. In addition, refresher training must be carried out on a regular basis to make sure that staff is abreast with the current practise of M&E.

The study also, recommends on formalising and empowering village-level M&E committees to enhance community involvement in water project implementation. This means that water projects implementers should consider stakeholder involvement in implementation and management of the projects. These committees ought to be trained to gather, document, and report project's findings so that the voices of communities are included during decision making. Participatory review meetings between the community representatives, contractors and the district engineers should be institutionalised to monitor the progress and jointly resolve arising problems. Finally, the study recommends the creation of an organised data usage framework to determine how M&E findings can be used to make decisions at every level of administration. The implementing agencies recommended to set-up a regular review meeting that is dedicated to studying the M&E reports, to arrive at trends and to concur on corrective measures. Also, the study recommends for the adoption of a simplified digital data management system to enable water authorities such as RUWASA and local authorities to share M&E findings with the community management teams. Also, decision-makers must make sure that each project report has a section stating how M&E findings were implemented and what outcomes were achieved.

Declaration of Interest

The authors declare that they do not have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Funding Declaration

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

REFERENCES

- Awinia, C. S. (2025). Effectiveness of innovative circular technologies for sustainable rural freshwater supply in Tanzania. *Frontiers in Sustainability*, 6, Article 1388175. <https://doi.org/10.3389/frsus.2025.1388175>
- Bulle, M. A., & Muchelule, Y. (2024). Participatory monitoring and evaluation practices and performance of water projects in Wajir County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship*, 8(1).

- Celestin, M. (2019). Impact of project management practices on contractor performance in Rwanda's local government sector. *International Journal of Computational Research and Development (IJCRD)*, 4(2), 38–45.
- Controller and Auditor General. (2023). *Annual general report of the Controller and Auditor General on the audit of development projects for the financial year 2022/2023*. National Audit Office of Tanzania.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Ermilio, J., Pattison, I., & Sohail, M. (2022). Performance monitoring and sustainable management of piped water supply infrastructure in developing communities. *Journal of Water Resources Planning and Management*, 148(2). [https://doi.org/10.1061/\(ASCE\)WR.1943-5452.0001470](https://doi.org/10.1061/(ASCE)WR.1943-5452.0001470)
- Flyvbjerg, B. (2014). What you should know about megaprojects and why: An overview. *Project Management Journal*, 45(2), 6–19. <https://doi.org/10.1002/pmj.21409>
- Harvey, P. A., & Reed, R. A. (2007). Community-managed water supplies in Africa: Sustainable or dispensable? *Community Development Journal*, 42(3), 365–378. <https://doi.org/10.1093/cdj/bsl001>
- Herman, A. K. (2023). *Impact of monitoring and evaluation practices on water supply projects performance* [Doctoral thesis, The Open University of Tanzania]. Open University of Tanzania Institutional Repository.
- Kapuya, H. A., Maluka, S. O., Hurtig, A.-K., & San Sebastian, M. (2024). Has stakeholder participation in health facility governing committees promoted social accountability? A qualitative study in Tanzania. *Global Health Action*, 17(1), Article 2432067. <https://doi.org/10.1080/16549716.2024.2432067>
- Kativhu, T., Mazvimavi, D., Tevera, D., & Nhapi, I. (2017). Factors influencing sustainability of communally-managed water facilities in rural areas of Zimbabwe. *Physics and Chemistry of the Earth, Parts A/B/C*, 100, 247–257. <https://doi.org/10.1016/j.pce.2017.04.009>
- Kitetu, J., & Ngige, K. (2015). The factors affecting functionality and sustainability of mechanized elements of water supply systems in Mbeere South Sub-County, Kenya. *African Journal of Science, Technology, Innovation and Development*, 7, 348–351.
- Kusek, J. Z., & Rist, R. C. (2004). *Ten steps to a results-based monitoring and evaluation system: A handbook for development practitioners*. World Bank.
- Kwikima, M. M. (2025). Enhancing integrated water resources management in Tanzania through participatory and institutional capacity building approaches. *World Water Policy*, 11(1), 105–121. <https://doi.org/10.1002/wwp2.12245>
- Mandara, C. G., Butijn, C., & Niehof, A. (2013). Community management and sustainability of rural water facilities in Tanzania. *Water Policy*, 15(S2), 79–100. <https://doi.org/10.2166/wp.2013.014>
- Masombe, J. M., & Omwenga, J. Q. (2020). Factors hindering sustainability of water projects in Makueni County: A case study of Kwing'ithya Kiw'u Project. *International Journal of Scientific and Research Publications*, 10(11), 885–918. <https://doi.org/10.29322/IJSRP.10.11.2020.p10784>
- Mgoba, S. A., & Kabote, S. J. (2020). Effectiveness of participatory monitoring and evaluation on achievement of community-based water projects in Tanzania. *Applied Water Science*, 10, 200. <https://doi.org/10.1007/s13201-020-01273-5>
- Minyiri, A. C., & Muchelule, Y. (2018). Influence of monitoring and evaluation on water project performance in Migori County, Kenya. *Africa International Journal of Multidisciplinary Research*, 2(6), 1–18.
- Njeri, J. W., & Omwenga, J. Q. (2019). Influence of monitoring and evaluation practices on sustainable projects: A case study of the National AIDS Control Council. *Strategic Journal of Business & Change Management*, 6(2), 132–152. <https://doi.org/10.61426/sjbcm.v6i2.1104>
- Nzamwita, D., & Sikubwabo, C. (2023). Effect of monitoring and evaluation on performance of water supply projects in Gakenke District, Rwanda. *Journal of Entrepreneurship & Project Management*, 7(9), 22–36. <https://doi.org/10.53819/81018102t2203>
- Ogunbayo, B. F., Aigbavboa, C. O., Ahmed, S., & Stevens, M. (2024). Assessing monitoring and evaluation effectiveness for projects in the construction industry. In *2024 International Conference on Science, Engineering and Business for Driving Sustainable Development Goals (SEB4SDG 2024)*. IEEE. <https://doi.org/10.1109/SEB4SDG60871.2024.10630084>
- Project Management Institute. (2021). *A guide to the project management body of knowledge (PMBOK® guide)* (7th ed.). Project Management Institute.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
- Schechner, R. (2003). *Performance theory* (Rev. and expanded ed.). Routledge.
- Selala, M. S., Senzanje, A., & Dhavu, K. (2019). Requirements for sustainable operation and maintenance of rural small-scale water infrastructure in Limpopo Province, South Africa. *Water SA*, 45(2). <https://doi.org/10.4314/wsa.v45i2.16>



- United Nations. (2022). *Secretary-General's message to the Sanitation and Water for All Sector Ministers' Meeting*. United Nations.
- United Nations. (2023). *The United Nations world water development report 2023: Partnerships and cooperation for water*. UNESCO. <https://doi.org/10.54679/QQJG4824>
- Wegoro, R. (2023). *The effects of monitoring and evaluation on sustainability of water projects in Liwale District in Lindi Region Tanzania* [Master's dissertation, The Open University of Tanzania]. The Open University of Tanzania Institutional Repository.
- Yahaya, J., Karia, A., & Tarimo, I. A. (2025). Stakeholders' engagement in planning and monitoring the performance of water supply projects at Songea Water Supply and Sanitation Authority. *Journal of Water Resources, Engineering, Management and Policy*, 2(2), 122–137. <https://doi.org/10.56542/wi.jwempo.v2.i2.a8.2025>