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Stakeholder Management Strategies and Performance of Water Works Development Projects in Northern Kenya

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ABSTRACT

Purpose: This study sought to examine the influence of stakeholder management strategies on the performance of water works development projects in Northern Kenya. Specifically, the study assessed the effect of continuous stakeholder monitoring, and stakeholder expectation management on project performance.

Methodology: The study adopted a descriptive research design. The target population comprised 87 water works development projects in Northern Kenya, with project managers serving as the unit of observation. A census approach was used to include all 87 project managers. Data was collected using a structured questionnaire with five-point Likert scale items. A pilot study was conducted in Kajiado County to test instrument validity and reliability, including assessment of content validity, construct validity, and internal consistency using Cronbach's alpha.

Findings: The study also found that continuous stakeholder monitoring is essential for sustaining project performance throughout the project lifecycle. Further, the study found that stakeholder expectation management is the most influential stakeholder management strategy affecting project performance. Thus, Clear communication, transparency, effective grievance handling, and continuous clarification of stakeholder expectations foster stakeholder satisfaction, trust, and commitment to project objectives.

Unique Contribution to Theory, Practice and Policy: The study therefore recommends that project implementing agencies establish structured stakeholder monitoring systems throughout the project lifecycle.

Key Words: *Stakeholder Management Strategies, Continuous Stakeholder Monitoring, Stakeholder Expectation Management*

Background of the Study

Water works development projects constitute critical infrastructure investments that directly influence public health, economic productivity, environmental sustainability, and social stability. In arid and semi-arid regions, where water scarcity constrains livelihoods and heightens vulnerability, such projects are essential for drought resilience, poverty reduction, and human development (UNEP-DHI, 2022). Globally, water infrastructure remains central to the realization of Sustainable Development Goal 6, which calls for universal access to safe and affordable drinking water and emphasizes improved water governance and integrated resource management (United Nations, 2023). However, despite the strategic importance of water infrastructure, the performance of water works projects continues to vary significantly across contexts, raising concerns regarding implementation efficiency, accountability, and sustainability.

Traditionally, infrastructure project performance was evaluated using the "iron triangle" of time, cost, and quality. Contemporary project management scholarship, however, recognizes that such metrics are insufficient for capturing the multidimensional nature of performance in public sector projects. Modern perspectives argue that project performance must also incorporate stakeholder satisfaction, realization of intended social benefits, and long-term sustainability of outcomes (Scheepers et al., 2022). This shift reflects growing recognition that infrastructure projects operate within complex social systems where multiple actors hold diverse interests, power positions, and expectations. Consequently, project success is increasingly linked to the effectiveness with which stakeholder relationships are managed throughout the project life cycle (Aaltonen et al., 2024; Mok et al., 2020).

Stakeholders are conceptualized as individuals or groups who can influence project decisions and outcomes or who are affected by project implementation (Aaltonen et al., 2024). In large-scale public infrastructure settings, stakeholders may include government agencies, contractors, donors, regulators, local communities, landowners, traditional leaders, and political actors. These actors often possess varying degrees of power, legitimacy, and urgency, and their interests may align or conflict at different stages of implementation (Prebanić et al., 2023). Empirical research demonstrates that inadequate stakeholder management contributes significantly to project delays, cost overruns, disputes, scope changes, and reduced post-completion sustainability (Mok et al., 2020). This evidence has elevated stakeholder management from a peripheral activity to a central strategic function in project governance.

Stakeholder management is increasingly framed as a structured and continuous process involving stakeholder identification, stakeholder analysis, engagement planning, monitoring, and expectation management across the project life cycle (Project Management Institute [PMI], 2021). Rather than relying on ad hoc participation mechanisms, contemporary scholarship emphasizes systematic identification of relevant actors, assessment of stakeholder influence and interests, proactive communication, and continuous monitoring of evolving stakeholder dynamics (Aaltonen et al., 2024). Furthermore, stakeholder expectations must be actively managed to prevent dissatisfaction and resistance that may arise even when technical project

objectives are achieved (Scheepers et al., 2022). This integrated perspective suggests that stakeholder management strategies are likely to shape project performance outcomes in measurable ways.

In Kenya, and particularly in Northern Kenya, water works development projects are implemented within highly complex governance and socio-political environments characterized by devolution, multi-level coordination, resource constraints, and layered authority systems (UNEP-DHI, 2022; WASREB, 2024). These conditions intensify stakeholder interdependence and increase the likelihood that project outcomes influenced by social acceptance, legitimacy, and conflict dynamics. Despite the recognized importance of stakeholder engagement, limited empirical research has systematically examined stakeholder management as an integrated strategic system comprising identification, analysis, continuous monitoring, and expectation management within the specific context of Northern Kenya water works projects. This study therefore examines how stakeholder management strategies influence the performance of water works development projects in Northern Kenya, providing evidence-based insights for improving infrastructure delivery in complex environments.

Water works development projects in Northern Kenya are implemented primarily to address chronic water scarcity within arid and semi-arid lands characterized by low rainfall, high evapotranspiration, and recurrent drought cycles. Counties such as Turkana, Marsabit, Mandera, Wajir, Isiolo, Samburu, and Garissa experience persistent water deficits that undermine household welfare, livestock productivity, and public health outcomes (UNEP-DHI, 2022). National policy frameworks identify water infrastructure expansion as a strategic priority for enhancing resilience and reducing vulnerability in these regions (United Nations, 2023). However, the complexity of implementing infrastructure within ASAL environments means that performance outcomes are often influenced by contextual and governance dynamics beyond engineering considerations (Prebanić et al., 2023).

The structure and technical design of water works development projects in Northern Kenya vary depending on hydrological and settlement conditions. Borehole drilling and equipping projects are common in areas with viable aquifers, while construction of water pans and earth dams supports surface water harvesting in zones with limited groundwater potential (UNEP-DHI, 2022). Pipeline reticulation systems, elevated steel tanks, and rural water supply schemes are implemented to enhance distribution efficiency and service reliability in dispersed settlements (WASREB, 2024). According to the Public Procurement Information Portal of the Government of Kenya, ongoing projects in the region include rehabilitation of water supply systems, expansion of rural schemes, and construction of community water kiosks. The diversity of these project types increases managerial complexity and amplifies the need for coordinated stakeholder engagement strategies throughout planning and implementation phases (Mok et al., 2020).

Implementation of water works projects in Northern Kenya involves multiple actors operating within Kenya's devolved governance structure. County governments are responsible for project planning and execution, while national agencies provide regulatory oversight and policy

direction (WASREB, 2024). Contractors, consultants, donor partners, and local community institutions also participate in project delivery processes, creating multi-layered stakeholder networks (UNEP-DHI, 2022). In addition to formal institutions, traditional authority systems such as clan elders and community leaders influence land access, resource allocation, and acceptance of project sites (Prebanić et al., 2023). The coexistence of formal administrative systems and informal governance structures heightens stakeholder interdependence and increases the importance of structured stakeholder identification and analysis mechanisms (Aaltonen et al., 2024).

Operational risks further complicate project performance in Northern Kenya. Remoteness, limited transport infrastructure, insecurity in border counties, and high logistical costs frequently affect implementation timelines and budget adherence (Office of the Auditor-General, 2024). Seasonal mobility of pastoralist communities may alter demand patterns and complicate site selection decisions, while disputes over employment opportunities and service coverage can generate community-level resistance (UNEP-DHI, 2022). Mok et al. (2020) emphasize that infrastructure projects embedded in volatile environments require adaptive stakeholder monitoring to anticipate and manage emerging risks. Without continuous stakeholder engagement and expectation management, such contextual pressures can translate into implementation delays and cost escalations.

Sustainability of completed water works infrastructure in Northern Kenya also depends heavily on stakeholder ownership and institutional coordination after commissioning. WASREB (2024) reports that infrastructure functionality challenges in ASAL counties are partly linked to weak governance mechanisms and limited maintenance capacity. Projects that lack clearly defined stakeholder roles and communication channels often experience operational decline despite technical completion. Scheepers et al. (2022) argue that stakeholder satisfaction and benefits realization are integral components of project performance in public infrastructure contexts. Therefore, expectation management and continuous monitoring become critical in sustaining long-term service delivery outcomes.

Statement of the Problem

In an ideal situation, water works development projects should be implemented efficiently and completed within planned scope, cost, and time, while delivering functional and sustainable water services that contribute to improved public health, livelihood resilience, and socio-economic development in arid and semi-arid land (ASAL) environments (UNEP-DHI, 2022; Surachman et al., 2022). Contemporary project management literature emphasizes that such performance outcomes depend not only on technical and financial competence but also on systematic stakeholder management, because infrastructure projects operate in complex social settings where stakeholder influence, legitimacy, and expectations shape implementation continuity and acceptance (Aaltonen et al., 2024; Mok et al., 2020).

Contrary to this ideal, evidence indicates that the performance of water works development projects in Kenya, including Northern Kenya, remains weak and characterized by delayed completion, stalled works, and poor value-for-money outcomes. Audit data show that water

entities had stalled or incomplete projects valued at KSh 2,729,838,192, with KSh 1,387,022,273 already paid, raising significant concerns regarding sunk costs and accountability in project execution (Office of the Auditor-General [OAG], 2024). A Northern Kenya-specific illustration is the Bokolow Bunyole Water Project in Mandera East Sub-County, whose revised contract value was KSh 75,428,783, with KSh 66,951,857 (approximately 88%) paid, yet the contractor was not on-site during audit inspection and the project was incomplete despite multiple extensions, including a final completion date of 10 July 2022, with the works still incomplete as of 13 February 2023 (OAG, 2024). These statistics demonstrate concrete implementation underperformance in Northern Kenya water works development projects.

Programme-level evidence from development partners further confirms these performance challenges in Northern Kenya. The World Bank implementation update on the Kenya Water and Sanitation Development Project reported that some contracts, including construction of fecal sludge treatment facilities in Wajir County, recorded completion rates of below 50%, with slow progress and instances of abandoned project sites in programme areas (World Bank, 2025). Sector-wide inefficiencies also persist, with WASREB reporting that non-revenue water increased from 43% to 44% in 2023/2024, representing approximately 203 million cubic metres of unaccounted-for water and estimated financial losses of KSh 11.9 billion (WASREB, 2024). While these system inefficiencies are utility-level measures, they reflect governance and operational weaknesses that threaten sustainability and performance of water infrastructure projects (WASREB, 2024).

Although these performance failures may be influenced by financing, contractor capacity, and technical constraints, recent project management scholarship demonstrates that stakeholder-related risks are central determinants of infrastructure project delays, disruption, and benefit underachievement, particularly in complex environments (Aaltonen et al., 2024; Mok et al., 2020; Prebanić et al., 2023). However, most Kenyan water project studies conceptualize stakeholder engagement broadly as participation and do not sufficiently examine stakeholder management as a measurable strategic system consisting of stakeholder identification, stakeholder analysis, continuous monitoring, and expectation management (Rukunga, 2024). Consequently, despite strong evidence of stalled and delayed water works projects in Northern Kenya, there remains limited empirical evidence on how specific stakeholder management strategies influence the performance of water works development projects in this unique ASAL context. Therefore, the present study was necessary to address this gap by investigating the effect of continuous monitoring, and expectation management on the performance of water works development projects in Northern Kenya.

General Objective

The general objective of this study is to examine effect of stakeholder management strategies and performance of water works development projects in Northern Kenya.

Specific Objectives

i. To assess the effect of continuous stakeholder monitoring on the performance of water works development projects in Northern Kenya.
ii. To establish the effect of stakeholder expectation management on the performance of water works development projects in Northern Kenya.

Theoretical Review

A theory refers to a systematic set of interrelated concepts and propositions that explain and predict relationships among phenomena within a given domain of inquiry (Creswell & Creswell, 2023). In research, a theoretical review examines existing theories relevant to the study variables and provides a conceptual foundation that guides hypothesis development and interpretation of findings (Saunders et al., 2023). This section therefore presents the key theories underpinning the relationship between stakeholder management strategies and project performance. Specifically, it draws on project complexity theory and expectation confirmation theory.

Project Complexity Theory

Project Complexity Theory, as conceptualized by Baccarini (1996), defines project complexity as a condition arising from the presence of numerous varied and interrelated elements within a project system. Baccarini distinguishes two primary dimensions of complexity: differentiation, which refers to the number and diversity of project components, and interdependency, which describes the extent to which those components interact. This framework has gained prominence in project management scholarship because it explains why infrastructure projects frequently exhibit unpredictable behavior and why traditional linear planning approaches often prove insufficient in dynamic environments (Mok et al., 2020). In complex systems, interactions among technical, organizational, and environmental elements generate uncertainty that cannot be fully controlled through rigid planning mechanisms.

In stakeholder-intensive infrastructure projects, complexity is significantly amplified because stakeholders themselves constitute interdependent and evolving subsystems. Projects are embedded within socio-political environments where multiple actors, government agencies, contractors, regulators, communities, and donors, interact continuously throughout implementation phases (Aaltonen et al., 2024). From a complexity perspective, stakeholders cannot be treated as static entities; rather, their interests, alliances, and influence may shift in response to contextual changes such as political transitions, emerging disputes, or alterations in project scope. Prebanić et al. (2023) emphasize that stakeholder dynamics evolve across project lifecycles, requiring adaptive governance mechanisms to sustain implementation continuity.

The implications of Project Complexity Theory for water works development projects in Northern Kenya are substantial. The region's arid ecology, mobility of pastoralist communities, devolved governance arrangements, and layered traditional authority systems create a highly dynamic stakeholder landscape (UNEP-DHI, 2022). In such contexts, stakeholder influence is

neither linear nor predictable. Continuous monitoring enables project managers to detect shifts in stakeholder salience, reassess engagement priorities, and adapt resource allocation accordingly. By acknowledging the dynamic and interdependent nature of project systems, Project Complexity Theory provides a robust conceptual foundation for examining continuous stakeholder monitoring as a determinant of project performance in Northern Kenya.

Expectation Confirmation Theory

Expectation Confirmation Theory (ECT), originally developed by Oliver (1980), explains satisfaction as a function of three core elements: pre-existing expectations, perceived performance, and the degree to which those expectations are confirmed or disconfirmed after experience. According to the theory, individuals form expectations prior to engaging with a service or outcome, and their subsequent satisfaction depends on whether perceived performance meets, exceeds, or falls short of those expectations. Although ECT was initially applied in consumer behavior and marketing research, it has since been extended to public sector performance, service delivery evaluation, and infrastructure governance contexts (Scheepers et al., 2022). In project environments, the theory provides a useful framework for understanding how stakeholders assess project success beyond technical completion metrics.

Within project settings, ECT implies that stakeholders evaluate performance not solely based on tangible outputs but on whether project outcomes align with their anticipated benefits, timelines, transparency standards, and fairness considerations. Scheepers et al. (2022) demonstrate that stakeholders often hold divergent expectations regarding project value realization, and misalignment between expected and delivered outcomes significantly influences perceived performance. Similarly, Aaltonen et al. (2024) argue that legitimacy in infrastructure projects is sustained when project managers actively manage stakeholder perceptions and communicate realistic deliverables. From this perspective, stakeholder expectation management becomes a strategic process involving early clarification of scope, continuous communication of constraints, and proactive resolution of expectation gaps.

In the context of water works development projects in Northern Kenya, Expectation Confirmation Theory provides a robust foundation for examining stakeholder expectation management as a determinant of performance. The region's socio-economic vulnerability and historical marginalization may heighten community expectations regarding improved livelihoods, equitable water access, and employment opportunities (UNEP-DHI, 2022). If project communication fails to align anticipated benefits with realistic deliverables, dissatisfaction may emerge despite infrastructure completion. By applying ECT principles, project managers can anticipate potential expectation mismatches, implement proactive communication strategies, and enhance stakeholder satisfaction. Consequently, Expectation Confirmation Theory underpins the inclusion of stakeholder expectation management as a key independent variable influencing project performance in this study.

Conceptual Framework

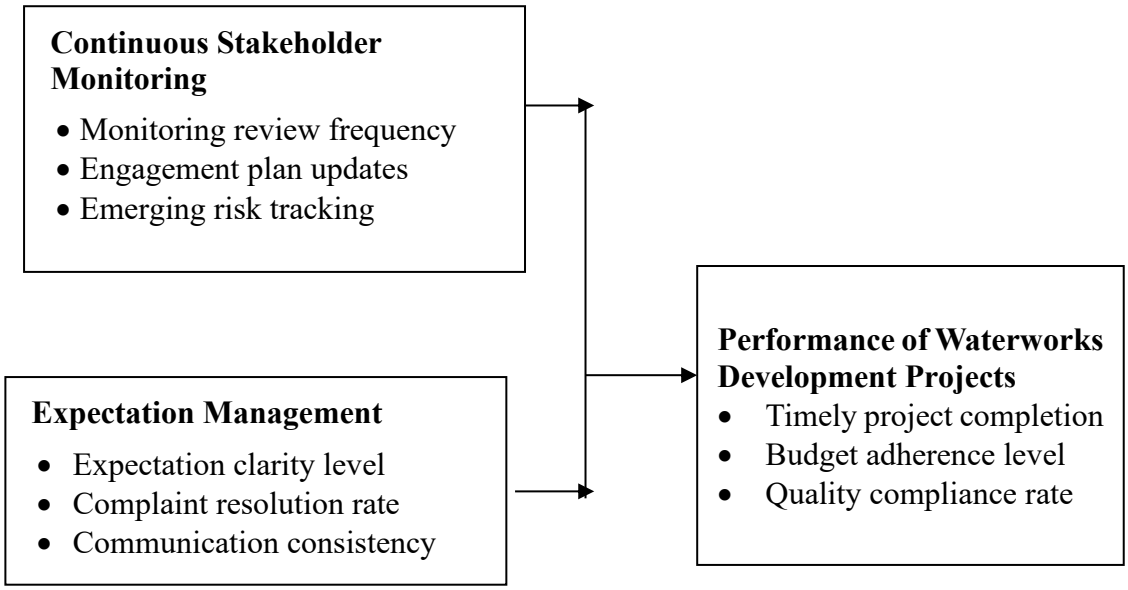

Figure 2. 1: Conceptual Framework

Empirical Review

Continuous Stakeholder Monitoring

A global quantitative study by Yang, Shen, and Ho (2021) examined adaptive stakeholder management practices, including continuous monitoring, across 198 large-scale infrastructure projects in China and Singapore. The researchers adopted an explanatory cross-sectional survey design targeting project directors and senior engineers selected through stratified random sampling. Data were collected using structured questionnaires measuring frequency of stakeholder reassessment, engagement plan revisions, and risk tracking mechanisms. Reliability was tested using Cronbach's alpha, while construct validity was assessed through confirmatory factor analysis. Structural equation modeling was employed to determine direct and indirect effects on schedule and cost performance. The findings indicated that projects incorporating periodic stakeholder salience reassessment reported significantly lower schedule variance and conflict-related disruptions. However, the study focused on high-capacity institutional settings and did not examine monitoring practices in resource-constrained or politically volatile water infrastructure environments, limiting contextual generalizability.

In a European context, Aaltonen and Kujala (2020) conducted a longitudinal case study of public infrastructure projects in Finland to analyze how ongoing stakeholder monitoring influences governance stability. The study employed a qualitative multiple-case design involving document review, observation, and semi-structured interviews across five transport and utility projects. Data were analyzed using thematic coding and process tracing to map changes in stakeholder influence over time. The researchers found that projects that embedded

formal monitoring reviews into governance routines demonstrated greater adaptability to political and community shifts. Nevertheless, the study relied on interpretive qualitative methods and did not quantify the magnitude of monitoring effects on measurable performance indicators such as time or budget adherence. The absence of statistical testing presents a methodological gap.

Mwakibete and Njunwa (2021) examined continuous stakeholder engagement in rural water supply projects in Tanzania using a descriptive cross-sectional design. A sample of 124 project committee members and district engineers was selected using simple random sampling. Data were collected via structured questionnaires and analyzed using Pearson correlation and hierarchical regression. Continuous stakeholder monitoring was measured through frequency of engagement reviews and updates to stakeholder communication plans. The results showed a significant positive association between monitoring frequency and post-implementation functionality rates. However, the study emphasized sustainability outcomes rather than construction-phase performance metrics such as cost control or schedule efficiency, leaving a gap in multidimensional performance assessment.

In Kenya, Musyoka and Kinyua (2022) investigated stakeholder monitoring practices in county infrastructure projects using an explanatory survey design. The study sampled 176 respondents from project management teams across four counties using proportionate stratified sampling. Data analysis involved multiple regression with diagnostic testing for multicollinearity and heteroscedasticity. Continuous monitoring was operationalized through measures of periodic stakeholder reassessment, risk tracking, and documentation updates. Findings indicated that structured monitoring significantly predicted perceived project efficiency and reduced stakeholder disputes. However, the research aggregated all infrastructure sectors and did not isolate water works development projects within arid and semi-arid regions, limiting sector-specific inference.

Stakeholder Expectation Management

Li, Ng, and Skitmore (2021) examined the role of expectation alignment in large-scale public infrastructure projects across the United Kingdom and Australia. The researchers adopted an explanatory cross-sectional survey design targeting 205 project managers and client representatives selected through purposive and stratified sampling. Data were collected using structured questionnaires measuring expectation clarity, communication transparency, grievance handling mechanisms, and perceived project outcomes. Reliability was confirmed using Cronbach's alpha coefficients above recommended thresholds, and construct validity was assessed through confirmatory factor analysis. Structural equation modeling was applied to test hypothesized relationships. The findings indicated that expectation clarity and structured grievance management significantly reduced stakeholder dissatisfaction and indirectly improved schedule and cost stability. However, the study focused on developed institutional environments and did not examine expectation management in resource-constrained or socially volatile contexts such as arid-region water infrastructure projects.

Similarly, Zhao and El-Gohary (2020) investigated expectation management practices in U.S. public–private partnership infrastructure projects using a mixed-method sequential explanatory design. The quantitative phase surveyed 167 project stakeholders, while the qualitative phase involved 18 follow-up interviews with senior project executives. Data were analyzed using multiple regression and thematic content analysis. Expectation management was operationalized through communication consistency, responsiveness to complaints, and transparency in benefit articulation. The study found that projects with structured grievance resolution systems reported lower incidence of stakeholder disputes and improved perceived performance. Nevertheless, the research emphasized governance perception rather than objective performance metrics and did not isolate water sector infrastructure, leaving a sector-specific gap.

Mwakalonge and Kavishe (2022) examined stakeholder expectation management in East African transport and water infrastructure projects using a descriptive correlational research design. A sample of 148 project officers was selected using stratified random sampling. Data were collected through Likert-scale questionnaires and analyzed using Pearson correlation and multiple regression analysis. The study reported that expectation clarity and timely complaint resolution were positively associated with improved project completion rates. However, the research combined multiple infrastructure sectors and did not disaggregate water works development projects, limiting contextual precision in hydrologically sensitive environments.

In Kenya, Mutiso and Wanyoike (2023) conducted a quantitative explanatory study on expectation management and performance of county government infrastructure projects. The study targeted 173 project stakeholders using proportionate sampling and analyzed data using hierarchical regression analysis with diagnostic testing for multicollinearity and normality. The findings indicated a statistically significant relationship between structured expectation management practices and reduced project delays. However, the study relied predominantly on self-reported performance indicators and did not triangulate findings with objective cost or quality compliance data, creating a methodological limitation.

RESEARCH METHODOLOGY

This study adopted a descriptive research design because it seeks to establish how stakeholder management strategies (stakeholder identification, stakeholder analysis, continuous monitoring, and expectation management) are associated with performance outcomes of water works development projects in Northern Kenya. The design is appropriate since the study aims to measure existing practices and outcomes across projects rather than introduce interventions or treatments (Siedlecki, 2020).The target population comprised 87 water works development projects in Northern Kenya (as per the official project list compiled from) and their project managers. This study used a census approach; therefore, the sample size was the entire population of 87 project managers (n = 87).

This study used a structured questionnaire because the study variables involve stakeholder management practices and project performance outcomes that can be measured consistently across multiple projects and respondents.

In this study, a pilot test was conducted in Kajiado County, which is outside the Northern Kenya study area but has comparable water infrastructure development projects and stakeholder engagement dynamics. Completed questionnaires were first checked for completeness, coded, and entered into Statistical Package for Social Sciences (SPSS) software version 29 for analysis.

The analysis was conducted in two stages: descriptive and inferential statistics.

Multiple regression analysis was conducted to test the combined and individual influence of independent variables on project performance (Y), the dependent variable. The regression model estimated was:

$$Y = \beta_0 + \beta_1 CSM + \beta_2 EM + \varepsilon$$

Where:

Y= Performance of water works development projects in Northern Kenya

CSM= Continuous Stakeholder Monitoring

EM= Expectation Management

RESEARCH FINDINGS AND DISCUSSION

Response Rate

Response rate refers to the proportion of questionnaires that were successfully completed and returned by respondents out of the total number of questionnaires administered. According to Mugenda and Mugenda, a response rate of 50% is adequate for analysis, 60% is good, and 70% and above is considered very good for making generalizations.

Table 1: Response Rate

Response Category	Frequency	Percentage (%)
Questionnaires Distributed	87	100.0
Questionnaires Not Returned	8	9.2
Questionnaires Returned	**79**	**90.8**

The study targeted all the 87 project managers involved in water works development projects in Northern Kenya using a census approach. Out of the 87 questionnaires distributed, 79 were successfully completed and returned, resulting in a response rate of 90.8%, while 8 questionnaires representing 9.2% were not returned. The response rate was considered excellent and adequate for statistical analysis and generalization of the findings.

Descriptive Statistics

Continuous Stakeholder Monitoring

This subsection presents respondents' perceptions regarding continuous stakeholder monitoring practices in water works development projects in Northern Kenya. Continuous stakeholder monitoring was assessed using seven statements relating to periodic stakeholder reviews, updating stakeholder engagement plans, monitoring stakeholder-related risks,

tracking community attitudes, detecting stakeholder dissatisfaction, adjusting communication strategies, and conducting formal stakeholder review meetings. The findings are presented in Table 2.

Table 2: Descriptive Statistics for Continuous Stakeholder Monitoring

Statement	Mean	Std. Dev.
The project team conducted periodic reviews to reassess stakeholder influence and interest levels.	4.18	0.76
Stakeholder engagement plans were updated when changes in stakeholder dynamics were observed.	4.11	0.82
Emerging stakeholder-related risks were formally documented and monitored.	4.09	0.85
The project team tracked changes in community attitudes toward the project over time.	4.14	0.80
Monitoring mechanisms were used to detect early signs of stakeholder dissatisfaction.	4.22	0.72
Communication strategies were adjusted based on monitoring feedback.	4.16	0.78
Formal review meetings were held to evaluate stakeholder engagement effectiveness at key milestones.	4.08	0.86
Composite Mean	**4.14**	**0.80**

The findings indicate that respondents generally agreed that continuous stakeholder monitoring practices were effectively implemented in water works development projects in Northern Kenya, as reflected by the composite mean score of 4.14 and a standard deviation of 0.80. The results suggest that project teams regularly monitored stakeholder dynamics, reviewed engagement effectiveness, and adjusted stakeholder management approaches to respond to changing project environments.

Respondents agreed that project teams conducted periodic reviews to reassess stakeholder influence and interest levels (M = 4.18, SD = 0.76). This finding suggests that project managers recognized that stakeholder influence is dynamic and may change throughout the project lifecycle. Through periodic reviews, project teams were able to identify emerging stakeholder concerns, changing power structures, and evolving stakeholder expectations, thereby enabling more effective project governance. The findings further revealed that stakeholder engagement plans were updated whenever changes in stakeholder dynamics were observed (M = 4.11, SD = 0.82). This implies that stakeholder engagement strategies were not treated as static documents but were continuously revised to reflect changes in stakeholder interests, influence levels, and project circumstances. Such adaptability is essential in infrastructure projects operating in complex and uncertain environments.

Respondents also agreed that emerging stakeholder-related risks were formally documented and monitored (M = 4.09, SD = 0.85). This finding demonstrates that project teams actively identified and tracked potential risks arising from stakeholder interactions and concerns. Monitoring stakeholder-related risks enhances preparedness and allows project managers to implement mitigation measures before risks escalate into serious implementation challenges.

Similarly, respondents agreed that project teams tracked changes in community attitudes toward the project over time (M = 4.14, SD = 0.80). This suggests that project managers appreciated the importance of understanding community perceptions and sentiments throughout project implementation. Monitoring community attitudes enables project teams to identify dissatisfaction early and take corrective action to maintain stakeholder support.

The statement that monitoring mechanisms were used to detect early signs of stakeholder dissatisfaction recorded the highest mean score (M = 4.22, SD = 0.72), indicating strong agreement among respondents. This finding suggests that project teams considered stakeholder satisfaction a critical aspect of project success and employed monitoring systems to identify concerns before they developed into conflicts, protests, or implementation delays. The results further show that communication strategies were adjusted based on monitoring feedback (M = 4.16, SD = 0.78). This implies that information gathered through stakeholder monitoring processes informed communication decisions and engagement approaches. The ability to modify communication strategies based on stakeholder feedback contributes to more responsive and effective stakeholder management. Respondents also agreed that formal review meetings were held to evaluate stakeholder engagement effectiveness at key project milestones (M = 4.08, SD = 0.86). This finding indicates that project teams periodically assessed the effectiveness of stakeholder engagement activities and identified opportunities for improvement. Such reviews contribute to continuous learning and improved stakeholder management performance.

Overall, the findings demonstrate that continuous stakeholder monitoring was widely practiced in water works development projects in Northern Kenya. The relatively high composite mean score suggests that project teams continuously reassessed stakeholder influence, monitored stakeholder-related risks, tracked stakeholder perceptions, and adjusted engagement approaches to accommodate changing project circumstances. These practices are likely to improve stakeholder relationships, minimize project disruptions, reduce conflicts, and enhance overall project performance.

The findings are consistent with Yang, Shen, and Ho (2021), who found that projects incorporating periodic stakeholder reassessment experienced significantly lower schedule variance and fewer stakeholder-related disruptions. Similarly, Aaltonen and Kujala (2020) established that continuous stakeholder monitoring enhanced governance stability by enabling project teams to adapt to evolving stakeholder dynamics. The findings further support those of Mwakibete and Njunwa (2021), who reported that continuous stakeholder monitoring positively influenced project outcomes through improved stakeholder engagement and communication. Likewise, Musyoka and Kinyua (2022) found that structured stakeholder monitoring significantly enhanced project efficiency and reduced stakeholder disputes in county infrastructure projects. In addition, Hassan and Abdullahi (2023) established that continuous stakeholder monitoring significantly improved project performance within infrastructure projects implemented in arid and semi-arid regions. These findings collectively suggest that continuous stakeholder monitoring contributes to improved project performance

by enabling project teams to anticipate challenges, identify emerging risks, and adapt stakeholder management strategies proactively.

Stakeholder Expectation Management

This subsection presents respondents' perceptions regarding stakeholder expectation management practices in water works development projects in Northern Kenya. Stakeholder expectation management was assessed using seven statements relating to communication of project objectives, timelines and deliverables, provision of accurate project information, management of project commitments, grievance handling mechanisms, complaint resolution, communication consistency, and clarification of stakeholder expectations. The findings are presented in Table 3.

Table 3: Descriptive Statistics for Stakeholder Expectation Management

Statement	Mean	Std. Dev.
Project objectives, timelines, and deliverables were clearly communicated to stakeholders.	4.24	0.70
Stakeholders received accurate information regarding potential project benefits and limitations.	4.18	0.76
The project team avoided making commitments that exceeded available resources.	4.11	0.81
A formal grievance or complaint resolution mechanism was established.	4.16	0.78
Complaints raised by stakeholders were addressed within reasonable timeframes.	4.09	0.84
Communication regarding project progress was consistent and transparent.	4.27	0.68
Stakeholder expectations were regularly clarified to prevent misunderstandings about project scope.	4.20	0.74
Composite Mean	**4.18**	**0.76**

The findings indicate that respondents generally agreed that stakeholder expectation management practices were effectively implemented in water works development projects in Northern Kenya, as evidenced by the composite mean score of 4.18 and a standard deviation of 0.76. The results suggest that project teams invested considerable effort in managing stakeholder expectations through effective communication, transparency, grievance management, and continuous clarification of project objectives and deliverables.

Respondents strongly agreed that communication regarding project progress was consistent and transparent (M = 4.27, SD = 0.68), making it the highest-rated statement within the construct. This finding suggests that project teams prioritized regular communication with stakeholders and ensured that relevant project information was disseminated openly throughout project implementation. Transparent communication is essential in maintaining stakeholder trust and minimizing misinformation that may generate dissatisfaction or resistance. The findings further revealed strong agreement that project objectives, timelines, and deliverables were clearly communicated to stakeholders (M = 4.24, SD = 0.70). This suggests that project

managers made deliberate efforts to ensure stakeholders understood project expectations from the outset. Clear communication of project scope and deliverables helps stakeholders develop realistic expectations and reduces the likelihood of misunderstandings during project implementation.

Respondents also agreed that stakeholder expectations were regularly clarified to prevent misunderstandings regarding project scope (M = 4.20, SD = 0.74). This finding demonstrates that expectation management was viewed as a continuous process rather than a one-time communication exercise. Regular clarification of expectations helps align stakeholder perceptions with actual project capabilities and constraints. Similarly, respondents agreed that stakeholders received accurate information regarding potential project benefits and limitations (M = 4.18, SD = 0.76). This result suggests that project teams attempted to provide balanced information concerning both anticipated benefits and project limitations. Such transparency is critical in preventing unrealistic expectations that may later result in stakeholder dissatisfaction.

The findings further indicate that formal grievance or complaint resolution mechanisms were established within projects (M = 4.16, SD = 0.78). This implies that project managers recognized the importance of providing stakeholders with formal channels for raising concerns and seeking resolution. Effective grievance mechanisms enhance stakeholder confidence and contribute to stronger stakeholder relationships. Respondents also agreed that project teams avoided making commitments that exceeded available resources (M = 4.11, SD = 0.81). This finding suggests that project managers exercised caution when communicating project promises and sought to align stakeholder expectations with available resources and project realities. Avoiding unrealistic commitments reduces the likelihood of expectation gaps and stakeholder disappointment.

The results further revealed agreement that complaints raised by stakeholders were addressed within reasonable timeframes (M = 4.09, SD = 0.84). Although this statement recorded the lowest mean score within the construct, respondents nevertheless agreed that stakeholder concerns were generally addressed promptly. Timely resolution of complaints helps prevent minor concerns from escalating into major disputes capable of disrupting project implementation.

Overall, the findings demonstrate that stakeholder expectation management was widely practiced in water works development projects in Northern Kenya. The relatively high composite mean score suggests that project teams consistently communicated project information, clarified stakeholder expectations, managed grievances, and maintained transparency throughout project implementation. These practices are likely to enhance stakeholder satisfaction, strengthen trust, reduce conflicts, and improve project performance.

The findings are consistent with Li, Ng, and Skitmore (2021), who found that expectation clarity and structured grievance management significantly reduced stakeholder dissatisfaction and enhanced project stability. Similarly, Zhao and El-Gohary (2020) established that communication consistency, responsiveness to complaints, and transparency in project

communication significantly improved stakeholder perceptions and project outcomes. The findings further support those of Mwakalonge and Kavishe (2022), who reported that expectation clarity and timely complaint resolution positively influenced infrastructure project completion rates in East Africa. Likewise, Mutiso and Wanyoike (2023) found that structured expectation management practices significantly reduced project delays and enhanced project performance in county government projects in Kenya. Further, Abdi and Kinyua (2024) established that communication consistency and grievance resolution responsiveness significantly predicted project effectiveness in infrastructure projects implemented within arid and semi-arid regions. Collectively, these findings suggest that effective stakeholder expectation management contributes significantly to project success by aligning stakeholder perceptions with project realities and fostering stakeholder support throughout implementation.

Performance of Water Works Development Projects in Northern Kenya

This subsection presents respondents' perceptions regarding the performance of water works development projects in Northern Kenya. Project performance was assessed using seven statements covering the three dimensions adopted in this study, namely timely project completion, budget adherence, and quality compliance. These indicators were used to determine the extent to which water works development projects achieved their intended objectives within the planned schedule, budget, and quality standards. The findings are presented in Table 4.

Table 4: Descriptive Statistics for Performance of Water Works Development Projects in Northern Kenya

Statement	Mean	Std. Dev.
The project was completed within the originally approved schedule.	4.09	0.83
Major project milestones were achieved within planned timelines.	4.14	0.78
Stakeholder-related conflicts did not significantly delay project completion.	4.06	0.86
The project was completed within the approved budget allocation.	4.11	0.81
Unexpected stakeholder demands did not result in major cost overruns.	4.03	0.88
The completed water works infrastructure met required technical and regulatory standards.	4.28	0.67
The project outputs perform effectively in delivering intended water services.	4.24	0.71
Composite Mean	**4.14**	**0.79**

The findings indicate that respondents generally agreed that water works development projects in Northern Kenya achieved satisfactory levels of performance, as demonstrated by a composite mean score of 4.14 and a standard deviation of 0.79. The results suggest that most projects were implemented successfully with respect to schedule performance, budget management, and quality compliance, reflecting effective project management practices and stakeholder engagement processes.

Respondents agreed that projects were completed within the originally approved schedules (M = 4.09, SD = 0.83). This finding suggests that project teams were generally successful in managing project activities and minimizing delays during implementation. Effective schedule management is critical in water infrastructure projects because delays can increase costs, disrupt service delivery plans, and reduce stakeholder confidence. The findings further revealed agreement that major project milestones were achieved within planned timelines (M = 4.14, SD = 0.78). This suggests that project implementation activities progressed according to planned schedules and that project managers effectively coordinated resources and activities to achieve key deliverables within the expected timeframes.

Respondents also agreed that stakeholder-related conflicts did not significantly delay project completion (M = 4.06, SD = 0.86). This finding indicates that stakeholder-related challenges were generally managed effectively and did not substantially interfere with project implementation. The result further suggests that stakeholder management practices adopted by project teams contributed to minimizing conflicts and maintaining project continuity. The results further show that respondents agreed that projects were completed within approved budget allocations (M = 4.11, SD = 0.81). This finding implies that project managers exercised reasonable financial control during implementation and ensured that project expenditures remained largely within approved financial limits.

Similarly, respondents agreed that unexpected stakeholder demands did not result in major cost overruns (M = 4.03, SD = 0.88). Although this statement recorded the lowest mean score within the performance construct, the result nevertheless indicates that stakeholder-related pressures were managed effectively enough to prevent significant budget deviations. This finding underscores the importance of stakeholder management in controlling project costs and maintaining financial sustainability. The statement that completed water works infrastructure met required technical and regulatory standards recorded the highest mean score (M = 4.28, SD = 0.67), indicating strong agreement among respondents. This finding suggests that quality assurance mechanisms were effectively implemented and that completed projects complied with relevant engineering, environmental, and regulatory requirements. Compliance with quality standards is particularly important in water infrastructure projects because it directly influences service reliability, safety, and long-term sustainability.

Respondents also strongly agreed that project outputs performed effectively in delivering intended water services (M = 4.24, SD = 0.71). This finding suggests that the completed infrastructure achieved its intended purpose and contributed to improved water service delivery within the project areas. Effective service delivery represents an important indicator of project success because it reflects the realization of intended project benefits.

Correlation Analysis

Table 5: Correlation Analysis

Variable		Performance	Continuous Stakeholder Monitoring	Stakeholder Expectation Management
Performance of Water Works Development Projects (Y)	Pearson Correlation	1		
	Sig. (2-tailed)	-		
	N	79		
Continuous Stakeholder Monitoring (X3)	Pearson Correlation	.794**	1	
	Sig. (2-tailed)	.000	-	
	N	79	79	
Stakeholder Expectation Management (X4)	Pearson Correlation	.821**	.611	1
	Sig. (2-tailed)	.000	.211	-
	N	79	79	79

Correlation is significant at the 0.05 level (2-tailed).

Continuous stakeholder monitoring had a strong positive and statistically significant relationship with project performance ($r = 0.794$, $p = 0.000$). This indicates that projects that regularly monitor stakeholder dynamics and adjust engagement strategies accordingly are more likely to perform well. The finding agrees with Aaltonen and Kujala (2020), who found that continuous stakeholder monitoring improved project adaptability and governance stability. Similarly, Musyoka and Kinyua (2022) reported that stakeholder monitoring enhanced project efficiency and reduced stakeholder disputes.

Stakeholder expectation management exhibited the strongest positive and statistically significant relationship with project performance ($r = 0.821$, $p = 0.000$). This suggests that effective communication, grievance management, and expectation clarification contribute significantly to project success. The finding is consistent with Li et al. (2021), who found that expectation management improved stakeholder satisfaction and project stability. Similarly, Mutiso and Wanyoike (2023) established that effective expectation management significantly enhanced project performance in Kenyan development projects.

Multiple Regression Analysis

Model Summary

The model summary was used to determine the overall explanatory power of stakeholder management strategies on the performance of water works development projects in Northern Kenya. The results are presented in Table 6.

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884	.781	.769	.287

The findings in Table 6 indicate that stakeholder management strategies had a strong relationship with the performance of water works development projects, as demonstrated by a correlation coefficient of R = 0.884. The coefficient of determination ($R^2 = 0.781$) implies that 78.1% of the variation in project performance was explained by continuous stakeholder monitoring, and stakeholder expectation management. The remaining 21.9% of the variation may be attributed to other factors not included in the model. The adjusted R^2 value of 0.769 further confirms that the model had strong explanatory power and was suitable for predicting project performance.

Analysis of Variance (ANOVA)

The ANOVA results were used to determine whether the regression model was statistically significant in explaining variations in the performance of water works development projects. The findings are presented in Table 7.

Table 7: ANOVA Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	22.742	2	11.371	142.13	.000
Residual	6.091	76	0.080		
Total	28.833	78			

The ANOVA results indicate that the regression model was statistically significant (F = 142.13, p = 0.000). Since the significance value was less than 0.05, the model was considered suitable for predicting the performance of water works development projects in Northern Kenya. The findings suggest that the combined effect of continuous stakeholder monitoring, and stakeholder expectation management significantly influenced project performance.

Regression Coefficients

The regression coefficients were used to determine the individual contribution of each stakeholder management strategy to the performance of water works development projects. The findings are presented in Table 7

Table 7: Regression Coefficients

Variable		Unstandardized Coefficients (B)	Std. Error	Standardized Beta (β)	t	Sig.
Constant		0.684	0.223	-	3.067	.003
Continuous Monitoring	Stakeholder	0.291	0.071	0.295	4.099	.000
Stakeholder Management	Expectation	0.324	0.068	0.339	4.765	.000

The regression equation derived from the findings was:

$$\mathbf{Y = 0.684 + 0.291X_1 + 0.324X_2}$$

Where:

Y = Performance of Water Works Development Projects

X_1 = Continuous Stakeholder Monitoring

X_2 = Stakeholder Expectation Management

Continuous stakeholder monitoring also had a positive and statistically significant influence on project performance (β = 0.291, p = 0.000). This implies that projects that continuously monitor stakeholder dynamics and respond to emerging stakeholder concerns are more likely to achieve superior performance outcomes. The finding agrees with Aaltonen and Kujala (2020), who reported that continuous stakeholder monitoring enhanced project adaptability and governance stability. Similarly, Musyoka and Kinyua (2022) found that stakeholder monitoring significantly improved project efficiency and reduced implementation disputes.

The findings further indicate that stakeholder expectation management had the strongest positive and statistically significant influence on project performance (β = 0.324, p = 0.000). The results suggest that clear communication, effective grievance handling, transparency, and regular clarification of stakeholder expectations play a critical role in enhancing project success. The finding is consistent with Li et al. (2021), who found that expectation management improved stakeholder satisfaction and project stability. Similarly, Mutiso and Wanyoike (2023) established that effective stakeholder expectation management significantly enhanced project performance in development projects.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The study also concludes that continuous stakeholder monitoring is essential for sustaining project performance throughout the project lifecycle. Regular monitoring enables project teams to identify emerging stakeholder concerns, respond to changing stakeholder dynamics, and implement corrective measures before issues escalate into major project risks. Consequently, continuous stakeholder monitoring enhances project adaptability and implementation effectiveness. Further, the study concludes that stakeholder expectation management is the most influential stakeholder management strategy affecting project performance. Clear

communication, transparency, effective grievance handling, and continuous clarification of stakeholder expectations foster stakeholder satisfaction, trust, and commitment to project objectives. Effective expectation management therefore minimizes stakeholder resistance and creates a conducive environment for successful project implementation.

Recommendations

The findings demonstrated that continuous stakeholder monitoring significantly contributed to improved project performance. The study therefore recommends that project implementing agencies establish structured stakeholder monitoring systems throughout the project lifecycle. Regular stakeholder reviews, monitoring of stakeholder concerns, assessment of community perceptions, and documentation of stakeholder-related risks should be conducted to facilitate timely interventions. Continuous monitoring enables project teams to respond proactively to emerging stakeholder issues and maintain stakeholder support during project implementation. The study established that stakeholder expectation management was the most influential predictor of project performance. The study therefore recommends that project managers prioritize transparent and consistent communication with stakeholders throughout project implementation. Project objectives, timelines, expected benefits, limitations, and project progress should be communicated clearly and regularly. In addition, effective grievance handling mechanisms should be established to facilitate timely resolution of stakeholder complaints and concerns. Managing stakeholder expectations effectively enhances stakeholder trust, satisfaction, and support for project activities.

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