EdinBurg Peer Reviewed Journals and Books Publishers
Journal of Entrepreneurship & Project Management
Vol. 5||Issue 2||pp 44-53||September||2025
Email: info@edinburgjournals.org||ISSN: 2789-2115

Community Involvement and the Performance of Community Water Projects in Nakuru County, Kenya

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Accepted: 28 August 2025 || Published: 04 September 2025

Abstract

Access to safe water remains a basic human right, yet many communities in Nakuru County lack it, making community-based water projects essential for survival and development. The research assessed the contribution of community involvement to the water project outcomes. Anchored on Participatory Development and Systems Theory, the study used a convergent parallel mixed-methods design. A sample of 370 beneficiaries and 5 key informants was selected. Data were collected via structured questionnaires and interview guides. The tools were tested for reliability (Cronbach's alpha ≥ 0.7). The data was analyzed through SPSS for descriptive statistics such as frequencies and percentages, mean, and standard deviation. Further, inferential statistics, correlation, and linear regressions were used to explore the relationships between the independent and dependent variables. The study adhered to ethical considerations. The study achieved an 85.9% response rate. Correlation analysis revealed a strong, positive, and statistically significant relationship between community involvement and the performance of community water projects ($r = .718$, $p < .01$), indicating that greater participation in activities such as goal setting, needs assessment, and decision-making enhances outcomes like water availability, timely completion, and community satisfaction. Regression results further confirmed this influence ($\beta = 0.450$, $p = .000$), leading to the rejection of the null hypothesis (H_{01}) and affirming that community involvement significantly and positively impacts project performance (Ha1). The study concludes that community involvement is the most critical factor influencing the performance of community water projects. Active participation in goal setting, needs assessment, and planning significantly enhances project success. The findings revealed a strong and statistically significant relationship between community involvement and project performance, indicating that communities that are engaged meaningfully in project processes experience higher satisfaction, improved water access, and timely project completion.

Keywords: *Community Involvement, Project Performance, Community Water Projects, Nakuru County, Kenya*

How to Cite: Kamau, M., Lango, B., & Onsarigo, T. (2025). Community Involvement and the Performance of Community Water Projects in Nakuru County, Kenya. *Journal of Entrepreneurship and Project Management, 5*(2), 44-53.

1. Introduction

Water projects are central to achieving Sustainable Development Goal (SDG) 6 on universal access to safe and clean water, yet their success depends heavily on active community involvement. When local communities engage in project design, monitoring, and evaluation, they are able to identify challenges early, mobilize resources, and strengthen ownership, accountability, and sustainability (Kirschke et al., 2020). In Bangladesh and the Philippines,

involving the community in community water projects reduced operational failures and enhanced local governance, confirming that community involvement is a critical driver of effective and sustainable water supply systems (Kirschke et al., 2020). Furthermore, research highlights that project performance improves significantly when communities participate in project design, monitoring, and evaluation, as this fosters ownership, accountability, and sustainability (Danielsen et al., 2022). Despite their success, challenges such as limited technical expertise and funding gaps still hinder the full realization of these benefits.

Across Africa, involving the community in water projects has proven the sustainability and performance of these projects. For instance, in Ghana, community involvement in borehole monitoring has reduced maintenance challenges, while South Africa's Integrated Water Resource Management (IWRM) emphasizes community capacity-building to strengthen infrastructure management (Agbenyo, Wisdom & Akanbang, 2021; Adams, Zulu & Ouellette-Kray, 2020). Uganda's Water User Committee model has lowered costs and expanded availability through collective management, while participatory M&E in Tanzania has enhanced project transparency (Manumbu, 2020; Masika, 2020). Nevertheless, weak institutional structures, political interference, and resource constraints continue to limit the effectiveness of community involvement in many African contexts.

In Kenya, the performance of water projects has similarly been linked to the involvement of community members. Community participation allows people to recognize their distinct requirements, which helps them develop appropriate solutions. Counties such as Kitui, Turkana, Makueni, and Narok have demonstrated that empowering communities through training, joint decision-making, and structured feedback forums leads to improved sustainability, reduced operational failures, and greater user satisfaction (Malusi, 2023; Dongol, Makokha & Sakataka, 2021; Jacob & Moi, 2024; Kaitei, Mabwoga & Konana, 2022). However, significant obstacles persist, including insufficient funding, lack of technical expertise, and weak communication systems, which constrain the positive effects of community-centered M&E practices. Strengthening institutional support, capacity development, and inclusive decision-making is therefore essential to enhancing the long-term performance of water projects in Kenya.

1.1 Problem Statement

Water remains the essential element that sustains all life forms. Life survival depends on water, while ecosystems fail to function properly, and society development processes halt when people lack water access. The basic human right of water access continues to remain out of reach for communities in Nakuru County because of which community-based water projects become a pressing necessity. The Nakuru County government has established major programs to resolve water shortage issues while improving sanitation facilities and irrigational water accessibility. The population of Mai Mahiu Ward receives safe water access through a 50,000-liter water tank built by Nakuru County Government (2024) that serves more than 1,000 residents. The county improved its water distribution through its HDPE pipe installation that extended to 7.6 kilometers (Nakuru County Government, 2024). Nakuru County established the Water and Sanitation Services Bill 2020 as legislation for community water project accountability through its financial and operational management framework (Kenya Law, 2020). The county has also forged international partnerships to strengthen water resilience. For instance, Governor Susan Kihika signed a Memorandum of Understanding with the Kingdom of the Netherlands under the Water as Leverage program, aimed at enhancing water infrastructure and sustainability (Nakuru County Government, 2024).

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Despite the initiatives implemented by the Nakuru County government, community water projects are still facing challenges and are not achieving optimal performance. The project experienced project time overrun, budget overrun, and as well do not meet product specifications, customer needs, and management objectives (Simiyu & Okwoyo, 2022). Insufficient resources adversely affect the performance of water projects in Nakuru County (Simiyu & Okwoyo, 2022). Additionally, the Nakuru County Water, Environment, Energy, and Natural Resources Sector Report (2022) highlights several projects with zero completion percentages, indicating that these initiatives have not been finalized. For example, the "Supply of Water Pipes to Community Water Projects" in Bahati Dundori, allocated KSh 1,000,000 in the 2021/22 financial year, remains at 0% completion (Nakuru County Government, 2022).

Consequently, the risk of waterborne diseases, such as cholera, typhoid, and dysentery, would increase, potentially triggering a public health crisis. Additionally, insufficient water supply for irrigation will disrupt agricultural activities, particularly in areas reliant on water for crops and livestock, leading to reduced food security, loss of income for farmers, and greater dependency on food imports, eventually causing economic and social issues. Nevertheless, there are few studies conducted to examine the influence of community involvement on the performance of community-based water projects in Nakuru County, hence underscores the present study.

1.2 Purpose of the study

The study sought to establish the influence of community involvement on the performance of community-based water projects in Nakuru County, Kenya.

1.3 Research hypotheses

H_{01}: There is no significant relationship between community involvement and the performance of community-based water projects in Nakuru County, Kenya

Ha_1: There is a significant relationship between community involvement and the performance of community-based water projects in Nakuru County, Kenya

2. Literature Review

2.1 Theoretical Review

The Participatory Development Theory, introduced by Robert Chambers in 1983, emphasizes the importance of active community participation in development projects to achieve sustainable outcomes. Chambers argued that for development efforts to succeed, beneficiaries must be directly involved throughout the entire project lifecycle, from design to implementation and evaluation. This involvement integrates local knowledge, cultural practices, and traditions into project activities, fostering a strong sense of ownership among community members. When communities feel ownership, they are more likely to use resources responsibly and maintain project benefits in the long term. The theory also underscores empowerment and sustainability, as community participation in needs assessments and decision-making ensures cultural relevance, builds trust, and encourages collaborative problem-solving among stakeholders.

However, the theory is not without weaknesses. Community participation can be time-consuming and resource-intensive, often requiring skilled facilitation and continuous engagement to remain effective. Furthermore, power imbalances within communities may marginalize certain groups, limiting inclusivity. Despite these limitations, the theory is highly applicable to the study of community involvement and project performance in Nakuru County's water projects. By adopting monitoring and evaluation frameworks that prioritize

community input alongside technical assessments, water initiatives can improve relevance, strengthen local ownership, and enhance long-term sustainability.

2.2 Empirical Review

Community participation is central to the performance of water projects because it fosters sustainable solutions, reduces costs, and enhances local ownership. When communities contribute labor, take part in decision-making, and engage in monitoring, projects not only align with local priorities but also achieve greater accountability and long-term success (Breschi & Catalini, 2021). Needs assessments that involve community members ensure that projects are relevant and responsive, which strengthens sustainability and effectiveness.

Globally, several countries demonstrate the value of community involvement in improving water project outcomes. In the United Kingdom, Earthwatch Europe implemented a large-scale citizen science initiative where volunteers monitored thousands of freshwater sites, expanding data collection capacity while promoting responsible water use. This participatory model influenced national policies and improved water governance through transparency and accountability (Gagliardi & Percoco, 2020). France restructured its water systems in cities such as Paris and Grenoble through participatory governance, including oversight committees of residents and activists. These reforms reduced costs, improved equity, and enhanced service delivery (González-López & Asheim, 2020). Similarly, grassroots movements in Spain advocated for public water management, resulting in political reforms that strengthened equity and sustainability (Mazzucato & Kattel, 2020; Rodríguez-Pose & Wilkie, 2020).

Regionally, African countries provide strong evidence of the link between community participation and water project performance. In South Africa, community labor reduced costs and supported sustainable infrastructure maintenance (Nuagah et al., 2020). Nigeria's community-led water committees strengthened financial transparency and boosted trust, while Ghana's Community Water and Sanitation Agency (CWSA) involved residents in identifying needs to design culturally relevant solutions (Baddianaah & Baatuuwie, 2020). In Tanzania and Uganda, participatory management committees improved infrastructure reliability and inclusivity, while Ethiopia's needs assessments enhanced user satisfaction and project utilization (Mengistie et al., 2024).

In Kenya, community participation has also been instrumental in shaping water project outcomes. In Kisumu County, residents' labor contributions during maintenance activities reduced costs and encouraged accountability (Mutonga, 2020). Kakamega County's elected water committees promoted inclusive decision-making and effective resource management, enhancing performance (Omondi et al., 2020). Kitui County engaged communities from the planning stage, enabling residents to identify water problems, choose solutions, and select sites for new sources. This participatory process-built ownership and long-term commitment to maintenance, aligning projects with community needs for sustainable results (Odalloh, 2022).

3. Methodology

The study used a convergent parallel mixed-methods design. A sample of 370 beneficiaries and 5 key informants was selected. Data were collected via structured questionnaires and interview guides. The tools were tested for reliability (Cronbach's alpha ≥ 0.7). The data was analyzed through SPSS for descriptive statistics such as frequencies and percentages, mean, and standard deviation. Further, inferential statistics, correlation, and linear regressions were used to explore the relationships between the independent and dependent variables. The study adhered to ethical considerations.

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4. Results and Discussion

4.1 Response Rate

A total of 370 questionnaires were distributed, with 318 returned fully completed, yielding a strong response rate of 85.9%, well above the 70% threshold commonly considered adequate in social science research.

4.2 Reliability test

Reliability analysis showed that the measurement items making up the community involvement and project performance of water projects constructs had Cronbach's Alpha values of 0.745 and 0.768, respectively, which were above 0.7, confirming good internal consistency (Mosaferi et al., 2022).

Table 1: Reliability Results

Construct	Cronbach's Alpha	Number of Items	Interpretation
Community Involvement	0.745	8	Acceptable internal consistency
Project performance	0.768	11	Excellent, internally consistent.

4.3 Descriptive Statistics Analysis

The study assessed the respondents' perception of the influence of community involvement on the performance of community water projects.

Table 2: Respondents' perception of the community

Statement	SD	D	M	A	SA	M	SD
Community members actively participate in setting project goals.	1 (0.3%)	0 (0.0%)	76 (23.9%)	180 (56.6%)	61 (19.2%)	3.94	.676
The project goals align with the needs identified by the community.	0 (0.0%)	2 (0.6%)	85 (26.7%)	143 (45.0%)	88 (27.7%)	4.00	.756
The community's input is rarely considered before finalizing project goals.	0 (0.0%)	0 (0.0%)	104 (32.7%)	169 (53.1%)	45 (14.2%)	3.81	.660
The community is frequently engaged in identifying water-related challenges.	2 (0.6%)	2 (0.6%)	119 (37.4%)	145 (45.6%)	50 (15.7%)	3.75	.744
Needs assessment exercises include diverse community representatives.	0 (0.0%)	4 (1.3%)	55 (17.3%)	208 (65.4%)	51 (16.0%)	3.96	.619
The findings from needs assessments seldom influence	0 (0.0%)	2 (0.6%)	25 (7.9%)	184 (57.9%)	107 (33.6%)	4.25	.617

project planning and implementation.							
The community is involved in identifying potential risks in water projects.	2 (0.6%)	49 (15.4%)	102 (32.1%)	119 (37.4%)	46 (14.5%)	3.50	.942
Local knowledge is frequently considered in developing risk management plans.	8 (2.5%)	11 (3.5%)	47 (14.8%)	149 (46.9%)	103 (32.4%)	4.03	.915
The community is rarely engaged in implementing risk mitigation strategies.	10 (3.1%)	28 (8.8%)	78 (24.5%)	169 (53.1%)	33 (10.4%)	3.59	.904

The results indicate that community-based water projects in Nakuru County have made substantial progress in engaging community members during the early phases of project planning. A majority of respondents (56.6% agreed; 19.2% strongly agreed) confirmed that community members actively participate in setting project goals (Mean = 3.94; SD = 0.676). Similarly, 45.0% agreed and 27.7% strongly agreed that project goals align with the needs identified by the community (Mean = 4.00; SD = 0.756), while 65.4% agreed and 16.0% strongly agreed that needs assessment exercises include diverse community representatives (Mean = 3.96; SD = 0.619). The relatively low standard deviations for these items point to high agreement and limited variability in respondents' experiences, suggesting that participatory approaches are largely embedded during the initial phases of water project planning. These findings were echoed by key informants. One noted that (KII_001, Male, 20th June 2025), *"...Before we write any proposals, we involve community leaders, including women groups, elders, and youth representatives, to ensure their needs are reflected."* Another added (KII_002, Female), *"...We deliberately include different groups in our needs assessments. Even people with disabilities are consulted now, something that never used to happen."* A senior officer from the county department (KII_003, Female) further observed, *"...Needs assessment has become a routine practice. We can't get funding approval without showing that community views were captured."* However, despite this inclusive engagement, 57.9% of the respondents agreed and 33.6% strongly agreed that the findings from needs assessments rarely influence actual project planning and implementation (Mean = 4.25; SD = 0.617), indicating strong consensus and minimal variability. This suggests that community participation, though structured and visible, remains largely consultative rather than transformative. Ass submitted by one key informant (KII_004, Male) who noted, *"...We collect a lot of views, but by the time implementation starts, budget and technical designs often override what people asked for."* These results support Sebunya and Gichuki (2024), who argued that while participatory planning frameworks are increasingly adopted, decision-making power remains centralized within technical or bureaucratic teams. Similarly, Wambua et al. (2020) emphasized the need to translate participatory assessments into actionable and community-driven designs to foster meaningful impact and trust.

Conversely, community involvement in risk management planning was rated less positively and showed greater variability, suggesting uneven engagement across different project sites. Only 37.4% agreed and 14.5% strongly agreed that the community is involved in identifying potential risks (Mean = 3.50; SD = 0.942), while 32.1% were neutral and 15.4% disagreed. In addition, 53.1% agreed and 10.4% strongly agreed that the community is rarely engaged in implementing risk mitigation strategies (Mean = 3.59; SD = 0.904), with 24.5% remaining

neutral and 11.9% expressing disagreement. These relatively high standard deviations imply that experiences varied widely, likely due to differences in leadership practices, technical capacities, or the scale of individual projects. This mixed experience was a key informant. She stated, *"...Community members don't usually understand the technical risks. So, they are informed but not involved when designing mitigation strategies..."* (KII_003, Female). Moreover, another key informant (KII_001, Male) supported this observation: *"...Most of the risk planning is done by engineers. Communities are only told what to expect in case of disruptions."* On the other hand, a more optimistic view was reported that, *"...We conduct joint hazard mapping, especially in flood-prone areas. We teach residents how to prepare and respond."* (KII_002, Female). Similarly, (KII_004, Male) reported, *"...In our recent projects, we involved the community in identifying vulnerable spots and agreed on quick response actions like shutting valves or using alternative sources."* These findings aligned with Therrien, Usher, and Matyas (2020), who reported that community exclusion from technical planning phases weakens risk preparedness and limits resilience. Kibet and Korir (2019) further observed that in Nakuru County, risk communication mechanisms often bypass community networks, undermining early warning systems and responsiveness. The results underscore the importance of not only informing communities but also equipping them with knowledge and decision-making power during both planning and implementation phases, especially when addressing risks that directly impact project continuity and sustainability.

4.4 Correlation Analysis

Bivariate Product-Moment Pearson correlation analysis was conducted to assess the magnitude, direction, and significance of the relationship between community involvement and performance of community water projects in Nakuru County.

Table 3: Correlation between Community Involvement and Performance of Water Projects

Variable		Project performance	Community Involvement
Project performance	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	318	
Community Involvement	Pearson Correlation	.718**	1
	Sig. (2-tailed)	.000	
	N	318	318

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

The correlation analysis revealed a positive, strong, and statistically significant relationship between community involvement and the performance of community water projects ($r = .718$, $p < .01$). This implies that increased community involvement in project activities such as goal setting, needs assessment, and decision-making is associated with better outcomes in terms of water availability, timely completion, and satisfaction. These findings are in line with Mugo and Njiru (2021), who observed that projects where communities are actively involved in early planning stages tend to record higher success and ownership. Similarly, Machuma, Odek, and

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Vol. 5||Issue 2||pp 44-53||September||2025
Email: info@edinburgjournals.org||ISSN: 2789-2115

Vundi (2024) emphasized that inclusive participation reduces project resistance, improves alignment with local needs, and strengthens accountability mechanisms.

4.5 Regression Analysis

Simple linear regression revealed that community involvement significantly predicted the performance of water projects.

From the conventional model, $Y = \beta_0 + \beta_1 X_1 + \varepsilon$

The resulting regression model was: Project Performance = 4.530 + 0.550(Community Involvement). The coefficient (B = 0.550) indicated that a one-unit increase in community involvement enhanced project performance by 0.550 units, underscoring the practical importance of participatory approaches in project management. Additionally, the standardized beta ($\beta = .450$, $p = .000$) confirmed a strong and statistically significant influence of community involvement on project performance, aligning with Masika (2020), who emphasized that active stakeholder participation enhances ownership and project outcomes.

4.6 Hypothesis testing

The study tested the null hypothesis (H_{01}) that community involvement has no significant effect on water project performance in Nakuru County. Results showed a strong, significant influence ($\beta = 0.450$, $p = .000$). With $p < 0.05$, the null was rejected, confirming community involvement positively impacts project performance (Ha1).

5. Conclusion

The study concludes that community involvement is the most critical factor influencing the performance of community water projects. Active participation in goal setting, needs assessment, and planning significantly enhances project success. The findings revealed a strong and statistically significant relationship between community involvement and project performance, indicating that communities that are engaged meaningfully in project processes experience higher satisfaction, improved water access, and timely project completion.

6. Recommendations

6.1 Recommendation for Practice

In practice, project implementers should institutionalize structured participatory planning mechanisms that allow community members not only to contribute to goal setting and needs assessments but also to influence how those assessments are translated into implementation strategies. Risk management planning should be made more inclusive by training community groups in risk identification and mitigation processes, thus enhancing their resilience and preparedness.

6.2 Recommendation for policy implication

At the policy level, county and national governments should develop guidelines that mandate community participation at all critical stages of project design and execution. These policies should require the documentation and integration of community inputs to promote transparency, accountability, and local ownership.

6.3 Recommendation for Theoretical Implication

From a theoretical perspective, development practitioners and scholars should further refine participatory development frameworks by integrating local governance models that prioritize power-sharing and community-driven solutions. This would ensure that community involvement is not merely symbolic but transformative in improving development outcomes.

References

Adams, E. A., Zulu, L., & Ouellette-Kray, Q. (2020). Community water governance for urban water security in the Global South: Status, lessons, and prospects. Wiley Interdisciplinary Reviews: Water, 7(5), e1466.

Agbenyo, F., Wisdom, N., & Akanbang, B. A. A. (2021). Stakeholder perspectives on participatory monitoring and evaluation in educational projects in Upper West Region, Ghana. Journal of Planning and Land Management, 2(1), 50-64.

Baddianaah, I., & Baatuuwie, B. N. (2020). Nexus between smallholder irrigation farming and farmers' livelihood outcomes in Ghana's Guinea Savannah. International Journal of Irrigation and Agricultural Development (IJIRAD), 4(1), 19-29.

Breschi, S., & Catalini, C. (2021). Tracing the links between science and technology: An exploratory analysis of scientists' and inventors' networks. Research Policy, 50(1), 104-120.

Danielsen, F., Eicken, H., Funder, M., Johnson, N., Lee, O., Theilade, I., ... & Burgess, N. D. (2022). Community monitoring of natural resource systems and the environment. Annual Review of Environment and Resources, 47(1), 637-670.

Dongol, J. A., Makokha, E. N., & Sakataka, W. (2021). Determinants of community participation in water projects: a survey of water-funded projects in Turkana County-Kenya.

Gagliardi, L., & Percoco, M. (2020). The impact of European Cohesion Policy in urban and rural regions. Regional Studies, 54(1), 40-51.

González-López, M., & Asheim, B. T. (2020). New perspectives on regional innovation policy: The role of global pipelines. European Planning Studies, 28(12), 2350-2367.

Jacob, W. M., & Moi, E. (2024). Public participation influence on the sustainability of water projects in Makueni County, Kenya. Reviewed Journal of Social Science & Humanities, 5(1), 718-732.

Kaitei, M., Mabwoga, S., & Konana, C. (2022). Influence of Public Sensitization on Public Participation in the EIA Processes in Narok North Sub-County, Narok County.

Kenya Law. (2020). Nakuru County Water and Sanitation Services Bill 2020. Kenya Law. https://kenyalaw.org

Kirschke, S., Avellán, T., Bärlund, I., Bogardi, J. J., Carvalho, L., Chapman, D., ... & Warner, S. (2020). Capacity challenges in water quality monitoring: understanding the role of human development. Environmental monitoring and assessment, 192, 1-16.

Machuma, R. S., Odek, A., & Vundi, N. (2024). Stakeholder participation and the sustainability of community-based water borehole projects in Mavoko Constituency, Machakos County, Kenya. *African Journal of Empirical Research*, *5*(4), 1076-1088.

Malusi, H. N. (2023). Project Management Practices and the Implementation of Water Projects in Kenya: a Case of Masinga Kitui Water Supply and Sanitation Project (Doctoral dissertation, University of Nairobi).

Manumbu, E. (2020). Community Participation in Monitoring and Evaluation and its Implication in Village Land Use Plan Sustainability: A Case of Kigoma District, Tanzania (Doctoral dissertation, The Open University of Tanzania).

Masika, N. (2020). *Stakeholder participation and project sustainability* (Doctoral dissertation, Kampala International University, College of Humanities and Social Sciences).

Mengistie, G. K., Haile, A. T., O'Donnell, G., Negash, E. D., & Bekele, T. W. (2024). Citizen science data to improve rainfall-runoff model performance in urbanizing Akaki catchment, Awash Basin, Ethiopia. Journal of Hydrology: Regional Studies, 53, 101822.

Mosaferi, M., Gilani, N., Delfi, S., Ahmadpour, R., & Kumar Chattu, V. (2022). Psychometric development and practical use of questionnaires designed to assess knowledge, attitude, and practice of women regarding the use of sanitizer at home to control coronavirus disease. *Environmental Health Engineering and Management Journal*, *9*(1), 55-64.

Mutonga, M. M. (2020). Factors influencing the sustainability of donor-funded community water projects: A case of Kitui Central Constituency, Kitui County, Kenya. University of Nairobi.

Nakuru County Government. (2022). Water, environment, energy, and natural resources sector report 2022. Nakuru County.

Nakuru County Government. (2024). Gathima Water Project in Mai Mahiu Ward. Nakuru County Government.

Nuagah, M. B., Boakye, P., Oduro-Kwarteng, S., & Sokama-Neuyam, Y. A. (2020). Valorization of faecal and sewage sludge via pyrolysis for application as crop organic fertilizer. Journal of Analytical and Applied Pyrolysis, 151, 104903.

Odalloh, J. (2022). Monitoring and evaluation systems and performance of water and sanitation projects in Kisumu West Ward, Kisumu County, Kenya. University of Nairobi.

Omondi, J. A., Odek, R., & Siringi, E. (2020). Influence of community participation on performance of Kisumu water and sanitation company projects in Kisumu County, Kenya. International Journal of Economics, Commerce and Management, 7(11), 353-398.

Rodríguez-Pose, A., & Wilkie, C. (2020). Innovating in less developed regions: What drives patenting in the lagging regions of Europe and North America? Growth and Change, 51(1), 113-142.

Sebunya, J., & Gichuki, A. (2024). The impact of participatory planning on sustainable development: a literature review. *Journal of Strategic Management*, *4*(4), 1-9.

Simiyu, I. M., & Okwoyo, R. M. A. (2022). Monitoring and Evaluation Budget and Performance of Water and Sanitation Projects in Nakuru County, Kenya.

Therrien, M. C., Usher, S., & Matyas, D. (2020). Enabling strategies and impeding factors to urban resilience implementation: A scoping review. *Journal of Contingencies and Crisis Management*, *28*(1), 83-102.