

Project Planning as an aspect of successful completion of Donor Funded Water Projects in Baringo County, Kenya.

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Abstract

Water is an essential resource for human survival and economic growth, yet access to clean and safe water remains a significant challenge with limited literature review aligned to semi-arid regions. This study focused on the influence Project Planning in the successful completion of donor-funded water projects in Baringo County where many initiatives and struggles to meet water project success is a mirage despite substantial investment. The study was anchored on the theory of planning and the theory of execution. The study employed a descriptive research design and gathered data from 357 stakeholders across various donor-funded water initiatives through a structured questionnaire. The sample size used of 84 respondents included project managers, staff, donor representatives, community members, and government officials. The study found that Project Planning, significantly affected successful completion of donor-funded water projects in Baringo County. The findings show that to improve project outcomes, it is vital to establish more consistent and comprehensive planning practices with clearer definition and communication of project scopes. Adherence to timelines and better resource allocation needed to be emphasized. Project teams were to ensure that contingency plans are not only developed but regularly updated and integrated into daily management. Strengthening of planning frameworks could help reduce schedule slippages and budget overruns, thereby increasing the likelihood of timely and successful project completion.

Key words: Project Planning: successful completion: Donor Funded Water Projects



Background Of the Study

Water scarcity remains a significant global challenge (Kithinji & Mwangi, 2022). As of 2021 approximately 2.2 billion people lacked access to safe managed drinking water services (UNICEF & WHO, 2021). Freshwater and water resources are not evenly distributed across different regions, including Africa, Europe, Asia, Latin America, the Caribbean, North America, and West Asia (Akinyemi, Oluwadare & Uche, 2022). Between 1900 and 1995, global freshwater consumption increased sixfold as populations grew and industries expanded with water-intensive lifestyles (Wambua, 2019; World Bank, 2021). With the increased consumption, successful completion of Water Projects for populations remained a significant challenge (Muli, 2020). Major sectors across continents like Africa, Asia, Australia, Europe, and the Americas, revealed that 50% of water projects failed, with only 2% reported successful (Cheruiyot, 2019).

Notable challenges in water projects successful completion are linked to planning, execution and stakeholders' involvement (Ngilambi & McCubbin, 2022; World Bank, 2022). Governments and international agencies in water scarce environment, have prioritized sustainable water supply solutions and frameworks in a way that addresses water related challenges. The governments have not provided models on planning execution and stakeholder involvement allowing projects to face significant delays, unsustainability and cost overruns. In Africa, water scarcity related to water project planning is linked to corruption, non-involvement of key stakeholders, political interference, insufficient funding and inadequate infrastructure (Mwenda, Kamau & Mutiso, 2023). Although several African governments have stressed the need of clear project execution plans, many projects fail to meet their completion timelines with 50% of water projects stalling or failing entirely and more than 15% failing to address project sustainability (African Development Bank, 2021). According to Munene (2020), only 5% of Africa's potential water resources have been developed although regionally, african nations are enhancing the adaptation of project planning to enhance project delivery. Nigeria has successfully utilized agile project management methodologies in large-scale water projects. This has reduced completion times by over 30% (Akinyemi et al., 2022). Rwanda has incorporated digital project management platforms allowing real-time tracking of water projects during execution (Chepyegon & Kamiya, 2018; Muthoni & Kimani 2021). This has led to improved transparency and increased stakeholder participation (World Bank, 2021). In Ghana, water shortages are largely linked to poor project plans leading to the underdevelopment and uneven water distribution of water resources (Chepyegon & Kamiya, 2018).



In Kenya, water a crucial natural resource poses hard decisions for project managers on its contribution to Vision 2030 and the National Water Master Plan 2030 (Shair,2016: World Bank, 2022). The Kenyan pressure to provide water has seen the creation of Water Resources Management Authority (WRMA). As water supplies stagnate and demand increases, water shortages are further intensified by factors such as population growth, fragmented water management and climate change. This has resulted into the creation of an Integrated Water Resources Management (IWRM) approach (UNICEF & WHO,2021).

In Baringo County, planning and decision-making of water project is only on paper and dominated by the elite (Kisumbi, Isaboke & Nassiuma, 2018: Pachur,Schulte-Mecklenbeck, Murphy & Hertwig, 2018).). It excludes stakeholders disadvantaged in water resource planning such as women and the poor (Cheruiyot, 2019). Moreover, the Baringo County's legal framework provides little guidance on enforcement and evaluation of water project plans for equitable water distribution (Kisumbi, Isaboke & Nassiuma, 2019). This leads to inequality in allocation. Issues such as poor response to water rights, a lack of transparency in plan execution, inadequate funding and accountability within the Ministry of Water and Irrigation contribute to these problems.

Statement of the Problem

Globally, many water projects struggle to achieve full success. A survey of 10,640 implemented projects (approximately US\$7.2 billion in value) found that only 2.5% achieved 100% project success. Over 50% of global water projects failed (Waweru & Muturi 2021). In Kenya, 25% to 30% of water projects completed became dysfunctional within the first three years of completion (Maghanga,2019). Despite the government's efforts in water resource management, significant challenges remain. In rural areas, provision of clean and safe drinking water is still lacking. Sixty seven percent (67%) of rural households are unable to access water resources (Water Resources Management Authority.2018). In Baringo County, water access stands at only 25%. Boreholes in significant regions produce unreliable yields (Gitau, 2020). This situation is worsened by recurring droughts, environmental degradation, and inadequate infrastructure. Poor maintenance, political interference, inadequate stakeholder engagement, and lack of proper project planning are among the factors contributing to the failure of water projects in Baringo. These issues have led lack of sustainability of water projects. Despite project planning being a critical aspect of project sustainability, it is ranked highly as lacking in water projects execution in Baringo county (Wambua, 2019: Wanyonyi,2020: Waweru &

26



Muturi, 2021). While there has been some research on the factors affecting water project completion in other parts of Kenya, limited studies have focused on project planning in semi-arid regions. Moreover, existing empirical studies have given varying findings on the effect of project planning and project success. This study seeks to address these gaps.

Objective of the Study

The purpose of this study is to examine the influence of Project Planning as an aspect of successful completion of Donor Funded Water Projects in Baringo County, Kenya.

Hypothesis of the Study

H₀: Project planning has no significant influence on successful completion of Donor Funded Water Projects in Baringo County, Kenya.

LITERATURE REVIEW

Mwangi (2020) conducted a study on the influence of project planning on the completion of road construction projects in Nairobi County, Kenya. The study targeted project managers, contractors, and government officials involved in road projects. Using a descriptive research design, Mwangi found that comprehensive planning significantly improved project completion rates by ensuring that resources were allocated efficiently, timelines were adhered to, and potential risks were mitigated. However, although the study highlighted a gap in addressing changes in project scope during the implementation phase impact on the original project plan it failed to link these to water projects.

Singh and Gupta (2019) conducted a study on the impact of project planning on the Completion of Infrastructural Projects in India. The study targeted contractors, engineers, and government officials in charge of infrastructure projects in various states in India. Using a quantitative research design, Singh and Gupta found that effective project planning, particularly in the areas of resource allocation, scheduling, and risk management, significantly contributed to the timely completion of projects. The study, however, highlights gaps in understanding the role of stakeholder involvement during the planning phase, which could have further improved project completion rates.

Martins and Silva (2020) examined the influence of project planning on the completion of public housing projects in Brazil. This study targeted project managers, architects, and government agencies involved in housing projects across different regions of Brazil. Using a case study approach, Martins and Silva found that poor planning led to



delays and cost overruns, resulting in many incomplete housing projects. The study emphasized the importance of early planning, particularly in risk management and stakeholder engagement, for successful project completion.

Kisaka and Musomi (2017) researched the role of planning on the Completion of Donor-Funded Water Projects in Machakos County, Kenya. The study targeted project beneficiaries, government officials, and NGOs involved in water projects. Through a mixed-method approach, the research found that the lack of detailed project planning contributed to delays and increased project costs. This the study found to often result in incomplete or poorly implemented projects. The study identified lack of focus on the use of modern project planning during the planning phase as the main challenge, which could have improved project completion.

Adek (2019) emphasizes that without a clearly defined execution process, project teams would rely on their own methods and experience. The author illustrates that without such a process, it becomes challenging to monitor, control, and make necessary adjustments during the project. The findings of his study show that at the project planning phase, all activities and resources related to the project are identified and systematically organized to ensure the successful delivery of products or services. The findings further show that the outcome of this phase is the creation of a project plan. Corroborating the former, Munene (2020) shows that the planning process outlines key aspects of the project, including the tasks that need to be completed, who is responsible, the timeline for task completion, the resources allocated, and the sequence of project execution, ensuring that the project activities are implemented efficiently and according to the established guidelines.

Theory of Planning

The Theory of Planning, was advanced by Koskela and Howell in 2002. The theory asserts that management involves two key fundamental components: planning and organizing. This theory posits that in project management, planning is primarily the responsibility of the managerial aspect. The managerial role focuses on outlining what needs to be done, while the effector role is responsible for executing or translating the plan into actionable steps (Koskela & Howell, 2002). According to this theory, planning requires the assembly of all the necessary resources needed to carry out the project. These resources include manpower, materials, time, and finances (Kraemer et al., 2020). In the context of construction project management, project planning entails customizing the project's requirements to suit specific goals. As highlighted by Mok and Shen 2021

28



this involves defining tasks, assigning responsibilities, and designing organizational procedures. Furthermore, management seeks to efficiently assemble resources into an interconnected structure that aligns with the project plan (Weiss & Wysocki, 1992).

The theory of Execution

The theory of Execution as first proposed by Emerson (1917) as cited by Haataja (2020) mirrors the job dispatching concept in manufacturing, where the primary focus is on bridging the gap optimally utilized. between planning and actual work execution. Job dispatching involves assigning tasks or activities to machines or work crews under centralized control. Bhaskaran and Pinedo (1991) define job dispatching as a process in which tasks are selected for processing based on logical decision rules, ensuring that available resources, such as machines. In project management, job dispatching translates into the execution phase, where tasks are communicated and assigned for action (Harrison & Wicks 2020). Planning plays a significant role in assigning these tasks, and once they are planned, dispatching is reduced to communication rather than an independent decision-making process (Bhaskaran & Pinedo, 1991). This theory is particularly relevant to water project management, emphasizing the importance of allocation of tasks to reduce delays during project execution. The theory is particularly applicable to the completion of water construction projects, where scheduling becomes crucial.

RESEARCH METHODOLOGY

Research Design

This study adopted a descriptive research design that utilizes both qualitative and quantitative approaches. The quantitative approach emphasized measurement, with data analyzed in numerical form to provide precise descriptions (Bafarasat,2021). According to Ngatia (2016), the quantitative approach, also known as the scientific method, is considered the traditional mode of inquiry in both research and evaluation. It places a strong emphasis on methodology, procedures, and statistical measures to test hypotheses and make predictions. Research based on quantitative methods facilitates systematic analysis of information, leading to valuable conclusions and recommendations regarding social settings and the individuals who exhibit those characteristics (Zavale & Schneijderberg 2022). The qualitative approach was employed to collaborate the quantitative approach.



Target Population

The target population for the study included 357 stakeholders from 70 donor funded water projects in Baringo county between the period 2020-2025. Specifically, the study targeted, project managers overseeing donor funded water projects in Baringo County. Additionally, the study involved project staff members involved in the execution of these projects, offering firsthand experiences regarding the adaptation and effect of these tools. It also included donor representatives from various funding organizations to gather, perspectives on project completion criteria and evaluation methods. Furthermore, community members who are beneficiaries of the water projects were included to provide feedback on the success of these initiatives. Lastly, the study incorporated insights from government officials responsible for the oversight of water projects. This is shown in Table 1

Table 1: Target Population

Target Population/Category	Respondents	Percentage of the Respondents
Project Managers	70	20
Project Staff	71	20
Donor Representative	10	1
Community Representatives	200	56
Government Officials	6	3
Total	357	100

Sample Size and Sampling Technique

A suitable sampling frame is essential for selecting the sampling units in this study. According to in this study, the sampling frame consisted of project managers, project staff, donor representatives, community members and government officials involved in donor-funded water projects in Baringo County. This information was gathered from relevant government agencies and organizations involved in these projects. The study utilized the slovins formula as used by Waithera and Wanyoike (2019) to determine the sample size, with a coefficient of variation in the range of 21% to 30% and a standard error between 2% and 5%. Considering a coefficient variation of 21% and a standard error of 2% the formula was employed as follows:

The formula: $n =$

$$\frac{N (CV^2)}{CV^2 + (N-1) e^2}$$



Where;

n = Sample size

N = Population

CV = Coefficient of Variation

E = Standard Error

$$n = \frac{357(0.21)^2}{(0.21)^2 + (357 - 1)0.02^2}$$

After replacing the values, the sample size of respondents was:

n = 84 Respondents

From the formula a sample of 84 respondents were picked using proportionate sampling technique

Response Rate

A total of 84 questionnaires were administered to respondents involved in donor funded water projects in Baringo County. The results are presented in Table 2.

Table 2: Response Rate Response Rate

	Frequency	Percent
Returned Questionnaires	71	84.5%
Unreturned Questionnaires	13	15.5%
Total	84	100%

Out of these, 71 were duly completed and returned, representing a response rate of 84.5%. This response rate is considered excellent and adequate for analysis (Babbie 2010).

Reliability of the Study Variable

The reliability of the study variable was tested. The results are shown in **Table 3:**

Table 3: Reliability of Study Variables

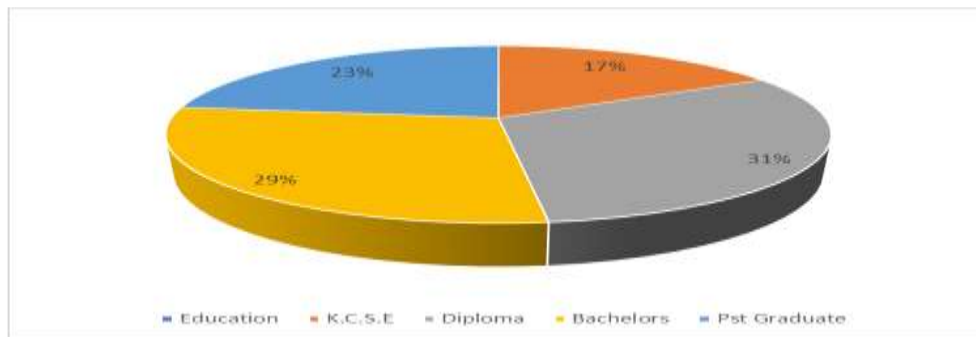
Project Planning	0.81	0.82	9
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These results, all exceeding the minimum threshold of 0.70 recommended by Bryman and Bell (2012) and Saunder, Lewis and Thornhill, (2017), confirm that the research instrument was reliable and suitable for data collection and subsequent analysis.



Distribution of the Respondents

Figure 1: Distribution of the Respondents Based on the Level of Education



The education levels of the respondents in this study show a wide range of qualifications, reflecting varying degrees of formal education among individuals involved in donor funded water projects in Baringo County. A total of 17% of the respondents had only completed the Kenya Certificate of Secondary Education (K.C.S.E.). The largest group, 31%, held a diploma, indicating a significant portion of the workforce has received specialized education or training in their respective fields. Additionally, 29% of respondents had obtained a bachelor's degree, showcasing a strong representation of individuals with formal higher education, likely equipped with advanced knowledge and skills relevant to project management and technical aspects of the projects. Lastly, 23% of the respondents held postgraduate qualifications, which suggests that a considerable number of the workforce are well-educated and may possess in-depth expertise in specific areas of project management or other related disciplines. The varied educational qualifications are important because it provides insights into the intellectual capacity and expertise available for the successful completion of donor funded water projects. Respondents with higher levels of education, particularly those with postgraduates and bachelor's degrees, are likely to have a deeper understanding of project management tools and strategic planning (Smith & Jones 2020).

Statements on Project Planning and Project Completion

In addition, the respondents were asked to indicate whether Project Planning impacted on Project Completion. The results are indicated in Table 4.

Table 4: Statements on Project Planning and Project Completion

	N	Min	Max	Mean	Std. Dev.
The project scope was clearly defined at the beginning of the project	71	2	5	3.65	1.126
Adequate resources were allocated to meet project objectives.	71	1	5	3.57	.928
A contingency plan is in place to handle potential risks or issues	71	1	5	3.96	.955
The project adheres to its planned timeline and schedules	71	1	5	3.58	1.009
Project milestones were well defined and monitored	71	1	5	3.69	1.098

The descriptive findings on project planning, as shown in Table 4, provide valuable insights into how planning practices influence the successful completion of donor-funded water projects in Baringo County. The highest-rated item was the presence of contingency plans (Mean = 3.96, SD = 0.955), which indicates that many respondents agreed that risk preparedness measures were considered during the planning phase. This suggests a proactive approach to managing unforeseen challenges. The fact that project milestones were considered well-defined and monitored (Mean = 3.69, SD = 1.098) implies that tracking and evaluation mechanisms were fairly well established, allowing project teams to gauge progress and make timely adjustments. The clarity of the project scope (Mean = 3.65, SD = 1.126) also received a moderately high rating, though the relatively high standard deviation implies mixed perceptions among respondents, with some possibly experiencing ambiguity in scope definition. Adequate resource allocation (Mean = 3.57, SD = 0.928) and adherence to planned timelines (Mean = 3.58, SD = 1.009) were rated slightly lower, which may point to inconsistencies in budgetary support and scheduling discipline across different projects. The variation in standard deviations ranging from 0.928 to 1.126 shows a notable spread in experiences, suggesting that while some projects were well-resourced and on schedule, others may have suffered from delays or underfunding.

The data highlights that while key elements of project planning are generally present. However, there are gaps in the uniform application of these practices. Proper definition of scope, sufficient resourcing, effective scheduling, and contingency planning



are all essential components that influence project success. The findings from the current study align strongly with the literature on the importance of project planning in ensuring successful project completion. The data showed that contingency planning and milestone tracking received relatively high mean scores, indicating that proactive risk management and progress monitoring were key planning activities within the donor-funded. These outcomes resonate with the African Development Bank. (2021), that emphasize that a clearly structured execution process anchored in detailed project planning is essential for maintaining control, adjusting effectively and achieving successful outcomes.

Project Completion

The study sought views on Project Completion in Baringo County. The results are shown.

Table 5: Project Completion

	N	Min.	Max.	Mean	Std. Dev.
The projects are completed within the planned timeline due to project planning tools	71	1	5	3.63	.959
Project adheres to the initial budget without significant overruns.	71	1	5	3.57	1.057
The completed project has been sustainable	71	1	5	3.51	1.026
The quality of the project outcomes meets the expectations of stakeholders beyond the implementation phase.	71	2	5	3.89	1.009
The project's deliverables are achieved as outlined in the original plan	71	1	5	3.86	.938

The descriptive findings on project completion provide a detailed assessment of how donor-funded water projects in Baringo County have performed against key success indicators. The highest-rated item, with a mean of 3.89 and standard deviation of 1.009, pertains to the quality of project outcomes meeting stakeholder expectations. This indicates a strong consensus among respondents that the projects were designed and executed with stakeholder expectations. The achievement of project deliverables as outlined in the original plan also received a high mean score of 3.86 (SD = 0.938), implying that the projects largely fulfilled their intended objectives. This reflects effective alignment. On the other hand, the completion of projects within the planned timelines had a mean score of 3.63 (SD = 0.959), pointing to a moderately positive outcome. While project management tools may have helped maintain schedules, the relatively lower score suggests that some projects experienced delays, possibly due to unforeseen challenges such as logistical setbacks, funding disbursement issues, or weather-related disruptions.



Budget adherence had an even lower mean of 3.57 (SD = 1.057), indicating variability in cost control across different projects. This could point to issues such as underestimation during budgeting, scope changes, or inadequate contingency planning. The lowest-rated aspect was completed project has been sustainable, with a mean score of 3.51 (SD = 1.026). This may be attributed to quality control issues, poor plan execution, or insufficient stakeholder engagement during the planning and execution phases. While the projects generally performed well in terms of sustainability and goal attainment, there remains room for improvement in ensuring timely delivery, budget adherence, and meeting stakeholder quality expectations. Project planning, on the other hand, recorded a moderate positive correlation of 0.300 with a significance level of 0.041. Although this is statistically significant at the 0.05 level, it is the weak. This suggests that while planning contributes positively to project completion through scope definition, resource allocation, and scheduling it may not be as impactful alone without the support of other project management functions. The findings imply that project planning needs to be integrated with robust implementation and control mechanisms to realize its full potential in ensuring project completion.

Project Planning and Project Completion

Table 6: Correlation

Pearson correlation		P
0.689		.000

Table 7: Regression

Variable	Adjusted R	P
Project Planning	0.512	.000

The findings indicated that project planning has a significant influence on the completion of donor-funded water projects. The Pearson correlation coefficient of 0.689 and a significant regression with an adjusted R of 0.512 show that 51.2% of the changes in project completion is caused by project planning efforts. The results further confirm a positive and statistically significant relationship between project planning and project completion. These results underscore the importance of structured planning in resource allocation, timeline management, and budgeting for successful project execution. These



results imply that well-defined and planned objectives, budgeting, timelines, and task allocations improve efficiency and reduce delays. Pre-planning creates thoroughness in execution, risks are anticipated and resources are allocated appropriately, leading to better implementation outcomes. It is therefore essential for project managers to invest time and expertise in the planning phase to enhance predictability and alignment of activities. Training in project planning and adoption of planning tools should be prioritized to further support this positive effect.

CONCLUSION

Project Planning and Project Completion

It is vital to establish more consistent and comprehensive planning practices to improve project outcomes. Clearer definition and communication of project scope should be enforced to avoid ambiguities that can lead to delays or resource misallocation. Stringent adherence to timelines and better resource allocation needs to be emphasized. Project teams should also ensure that contingency plans are not only developed but regularly updated and integrated into daily management. Strengthening planning frameworks with these elements helps reduce schedule slippages and budget overruns, increasing the likelihood of timely, cost-effective and successful project completion.

Managerial Implications

It is essential to adopt a holistic approach that addresses both technical and stakeholder aspects of project plan execution to improve the successful completion of donor-funded water projects. Ensuring timely planned completion requires enhanced coordination among all project stakeholders, clear communication channels, and accountability mechanisms that monitor progress against set milestones.

REFERENCES

- Adek, R., T. (2019). Determinants of successful project implementation of infrastructure project in devolved units; a case of Mombasa County, Kenya. Unpublished Doctoral dissertation, University of Nairobi, Kenya.
- African Development Bank. (2021). Water infrastructure projects: Lessons and challenges in Africa. African Development Bank Group.
- Akinyemi, O., Oluwadare, T., & Uche, E. (2022). Adopting agile project management in water supply projects in Nigeria. *Journal of Project Management*, 15(3), 203-219.



- Babbie, D.M. (2010). Inter-relationships among store images, store satisfaction, and store loyalty among Korea discount retail patrons, *Asia Pacific Journal of Marketing and Logistics*, 15(4), 2-7.
- Bafarasat, A. Z. (2021) Collecting and validating data: A simple guide for researchers. Advance. <https://doi.org/10.31124/advance.13637864.v1>
- Bhaskaran, K. & Pinedo, M. (1991). Dispatching. In: Handbook of Industrial Engineering. G. New York
- Bryman A., & Bell, E. (2012). Social Research Methods. New York: Oxford Publishers.
- Chepyegon, C., & Kamiya, D. (2018). Challenges faced by the kenya water sector management in improving water supply coverage. *Journal of Water Resource and Protection*. 10(1), 85-105.
- Cheruiyot, K., J. (2019). Analysis of Household Water Demand, Distribution and Community Management Strategies in Nyongores Sub catchment, Bomet County, Kenya. Unpublished masters' thesis, Kenyatta University, Kenya.
- Gitau, L. M. (2020). The effects of risk management at project planning phase on performance of construction projects in Rwanda. Master's Thesis, Jomo Kenyatta University of Agriculture and Technology.
- Haataja, D. (2020). Stakeholder Theory: The New Story of Business? [Thesis]. Uppsala University
- Harrison, J. S., & Wicks, A. C. (2020). Stakeholder theory, value, and firm performance. *Business Ethics Quarterly*, 30(1), 99-134.
- Kisaka, S. E. & Musomi, B. (2017). The effect of risk management on performance of investment firms in Kenya. *Orsea Journal*, 5(1).
- Kisumbi, C., K., & Isaboke O., K. (2018). Influence of Tokenism in Sustainability of Rural Community Water Projects in Kenya. *International Journal of Innovative Research & Development* 7(1), 294-304.
- Kisumbi, C., K., Isaboke O., K. & Nassiuma, B. (2019). Role of Citizen Participation in Sustainability of Water Projects in Makueni County, Kenya *International Journal of Innovative Research & Development*, 6(11), 1-15.
- Kithinji, P., & Mwangi, J. (2022). Effectiveness of project planning in enhancing water project completion in Kenya. *International Journal of Water Resources and Development*, 38(2), 111-126.
- Koskela, L., & Howell, G. (2002). The Theory of Project Management: Explanation to Novel Methods. Proceedings IGLC-10. Gramado-Brazil.



- Kraemer, K., Henrich, G., Koskela, L., & Kagioglou, M. (2020). How Construction Flows Have Been Understood in Lean Construction. Retrieved on 27th February 2022, from Professor Lauri Koskela Papers: <http://www.laurikoskela.com>
- Maghanga, M. E. (2019). Effect of project risk management practices on project performance in cement manufacturing firms in Kenya. *Clear International Journal of Research in Commerce & Management*, 10(3).
- Martins, P., & Silva, M. (2020). The influence of project planning on the completion of public housing projects in Brazil. *Journal of Construction Engineering and Management*, 146(6), 05020002. [https://doi.org/10.1061/\(ASCE\)CO.1943.7862.0001820](https://doi.org/10.1061/(ASCE)CO.1943.7862.0001820)
- Muli, S. (2020). Role of risk management practices in the success of water projects in Machakos County, Kenya. *African Journal of Project Management*, 8(1), 18-30.
- Munene, Z., K. (2020). Factors influencing implementation of water projects under the devolved system of governance in Kenya: A case of Meru County government. Unpublished thesis, University of Nairobi, Kenya.
- Muthoni, J., & Kimani, W. (2021). Impact of monitoring and evaluation systems on the completion of community-based water projects in Laikipia County, Kenya. *International Journal of Project Management Studies*, 8(3), 45-56
- Mwangi, D. (2020). The influence of project planning on the completion of road construction projects in Nairobi County, Kenya. *Journal of Project Management and Development Studies*, 8(3), 23-38.
- Mwenda, N., Kamau, D., & Mutiso, L. (2023). Political interference and its impact on water project delivery in Kenya. *Kenya Journal of Project Management*, 7(1), 75-88.
- Ngatia, C. N. (2016). Institutional Determinants of Participatory Monitoring and Evaluation Systems Implementation among Community Based Development Projects in Kibera Slum, Kenya.
- Ngilambi and McCubbin. (2022). Towards effective implementation of community-based water safety plans: stakeholders engagement process in Afghanistan. 1–8.
- Pachur, T., Schulte-Mecklenbeck, M., Murphy, R. O. & Hertwig, R. (2018). Prospect theory reflects selective allocation of attention. *Journal of Experimental Psychology: General*, 147(2), 147.
- Saunders, M., Lewis, P., & Thornhill, A. (2017). *Research Method for business students*. (5th ed.) England: Financial Times Prentice Hall.
- Shair, U. I. (2016). Influence Of Project Management Skills of Staff on Performance of Government Funded Projects in Kenya: The Case of Kazi Kwa Vijana Initiative in



- Kibera, Nairobi County, Kenya. Unpublished Master's Thesis, University of Nairobi.
- Singh, R., & Gupta, P. (2019). The impact of project planning on the completion of infrastructure projects in India. *International Journal of Project Management*, 37(7), 1239-1254.
- Smith, R., & Jones, T. (2020). The role of monitoring and evaluation in the successful implementation of rural water supply projects in Uganda. *Water Resources and Rural Development* 10(2), 112-125.
- UNICEF & WHO. (2021). Progress on household drinking water, sanitation, and hygiene 2000-2020: Five years into the SDGs. World Health Organization.
- Waithera, S. L. & Wanyoike, D. M. (2019). Influence of project monitoring and evaluation on performance of youth funded agribusiness projects in Bahati Sub County, Nakuru, Kenya. *International Journal of Economics, Commerce and Management*, 3(11), 375.
- Wambua, C. M. (2019). Monitoring And Evaluation Practices and Performance of County Funded Education Projects in Makueni County, Kenya. Doctoral dissertation, Kenyatta University
- Wanyonyi, W. K. (2020). Influence of risk management strategies on project performance: a survey of selected international development organizations based in Nairobi City, Kenya. University of Nairobi Student's Research.
- Water Resources Management Authority. (2018). Strengthening Regulations for Sustainable Water Resources Management in Kenya. Nairobi: Water Resources Management Authority
- Waweru, P. G., & Muturi, W. (2021). Influence of stakeholder analysis on the completion of water projects in Kiambu County, Kenya. *Journal of Business and Project Management*, 12(1), 76-84.
- Weiss, J. W., & Wysocki, R. K. (1992). 5-Phase of Project Management: A Practical Planning & Implementation Guide. Cambridge: Perseus Books
- World Bank. (2021). Project management in water resource management: Case studies from sub-Saharan Africa. World Bank Group.
- World Bank. (2022). Global water projects and lessons learned: Enhancing efficiency and sustainability. World Bank Group.
- Zavale, N. C., & Schneijderberg, C. (2022). Mapping the field of research on African higher education: A review of 6483 publications from 1980 to 2019. *Higher Education*, 83(1), 199-233.

