

PROJECT STAKEHOLDER MANAGEMENT AND PERFORMANCE OF DROUGHT MITIGATION PROJECTS IN MAKUENI COUNTY IN KENYA

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Abstract: Global warming and its associated climate impacts, particularly drought, present significant challenges worldwide. In Kenya, the National Drought Management Authority (NDMA) highlights that 80% of the country's land is classified as Arid or Semi-Arid Land (ASAL). Collaborative drought mitigation initiatives involving diverse stakeholders, including communities, government bodies, donor organizations, and political figures, are pivotal in mitigating the adverse effects of drought. Effective stakeholder management is crucial for the success of community-based projects. However, existing literature indicates a lack of full stakeholder engagement, leading to project failures. This study investigated project stakeholder management and the performance of drought mitigation projects in Makueni County, Kenya. The study's specific objectives were; to assess how stakeholder identification, training, engagement, and monitoring impact the performance of drought mitigation projects in Makueni County. The research was guided by normative stakeholder, transtheoretical, system, and control theories, which informed the study variables. The study employed a descriptive design in conjunction with purposive sampling to choose participants. The study included 16 projects from a target population of 43, whereby primary data was collected with the aid of a questionnaires and secondary data obtained from the NDMA. Data analysis involved both descriptive and inferential statistics. The study established that stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring were significant predictors of performance of drought mitigation projects in Makueni county. An adjusted $R^2= .726$, taken as set predictors of stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring accounted for 72.6% of the variance in performance of drought mitigation projects in Makueni county. It was thus established that stakeholder management was an effective way of enhancing performance of drought mitigation projects in Makueni county.

Keywords: Project Stakeholder Management, Drought Mitigation Projects, Project Performance, stakeholder identification, stakeholder training, stakeholder engagement, stakeholder monitoring.

A. Background of the Study

Drought is a water scarcity period caused by a complex collaboration between changes in storage, human inflows and outflows, and land surface processes, and meteorological anomalies (Haile et al., 2020). In a region experiencing below-average precipitation, a drought results in prolonged shortages of atmospheric, surface, or groundwater supplies; although droughts can last for a long time, even a brief, A severe drought can be extremely damaging and detrimental to the economy. (Kikon &Deka, 2022). The severity of the drought depends on its duration, degree of moisture/water deficiency, and the size of the affected area (Oukaddour et al., 2023). Countries that rely on agriculture for social and economic development are significantly affected whenever drought conditions occur, and the consequences are disastrous.

Drought is a global challenge that affects many countries, causing food insecurity, public health issues, water conflicts, and lifestyle changes (Khan et al., 2018). In Europe, countries such as France, Belgium, the Netherlands, and Germany have experienced drought, affecting agriculture and leading to a reliance on imports (Euractiv, 2019). However, African countries, particularly those near the Sahara, Namib, and Kalahari deserts, are among the worst affected, requiring intervention measures such as implementing drought mitigation projects (Orimoloye et al., 2022). In Kenya, drought has a detrimental impact on various aspects of the economy and the general populace, affecting water provision, hydropower production, food stability, mortality among humans, livestock, and wildlife, unemployment, and public health (Becerril-Piña et al., 2021). Arid and Semi-Arid Lands in Kenya cover an extensive land area where more than 40% of the population lives (Njoka et al., 2019). Drought is Kenya's prime recurrent natural disaster, affecting millions of people and livestock. As a result, in 2026 the National Drought Management Authority was founded as a specific disaster risk management system to deal with drought.

Despite implementing drought mitigation projects in Kenya, particularly in the Makueni region, many projects still need to meet the expected performance levels (National et al., 2019). Ineffective stakeholder management is attributed to the failure of these projects despite the intensive research and significant investment in these projects (Bendell, 2019). Therefore, it is crucial to measure the performance of drought mitigation projects using key indicators such as output, outcome, and impact (FundsforNGOs, 2019). Output includes cover crops, gabions, mulch, and water boreholes. In contrast, outcomes include the availability of safe water for households, reduction in diseases associated with contaminated water or malnutrition, and availability of water for fish, crop, and livestock farming (Alta, 2019; Tam et al., 2020). The impact of a project refers to the long-term consequences, such as food security, healthy ecosystems, and economic empowerment among communities (Kuhnert et al., 2021).

I. Stakeholder Management

Organizations implementing drought mitigation projects have had to rethink how to increase the performance of such projects, and one of the ways is through stakeholder management. According to Saad and Muhammad (2022), stakeholder management works with and through all the parties with direct or indirect interest and influence in the success of drought mitigation projects. Saad and Muhammad (2022) assert that stakeholder management ensures that the stakeholders' interests are considered in the project implementation. Urbinatiet al. (2021) define stakeholders as individuals or organizations that actively participate in a project, whose interests may be impacted by its execution or completion, and who may have the ability to influence the project's goal and outcomes. Through stakeholder management, the project implementers also benefit from the invaluable input from the stakeholders concerned. Effective stakeholder management involves stakeholder identification, stakeholder training, stakeholder engagement, and monitoring stakeholder engagement (Bendell, 2021).

Gregory et al. (2020) define stakeholder identification as the process through which interested parties to a project are identified. These are individuals, organizations, or groups of people who would be affected by the project implementation or affect the project's success. According to Lebel et al. (2020), any drought mitigation project usually has numerous stakeholders, such as the community, county government, government agencies, donor organizations, political leaders, cultural leaders, and workers. It is, therefore, critical to assess the nature and magnitude of the stakeholders' influence on the projects' success. With proper identification of the stakeholders, the implementers would have a challenge in determining the deliverables of the projects and getting the prerequisite and requisite input from the key stakeholders.

According to Raikes et al. (2022), the degree of support from stakeholders contributes to the success of drought mitigation projects. The level of support that the stakeholders accord to the project implementers depends on the perceived benefits and effects of the project to the stakeholders. Raikes et al. (2022) also add that the ability to contribute significantly facilitates effective and efficient drought mitigation project implementation and maintenance depends on the knowledge and skills of the stakeholders. Therefore, stakeholder training is of paramount importance. Stakeholder training entails imparting knowledge and skills to all stakeholders on how the project would affect them and how they can contribute or how their contribution affects the successful implementation and maintenance of the drought mitigation projects (Baudoin et al., 2019).

According to Wehn et al. (2020), stakeholder engagement ensures that the identified relevant stakeholders are actively involved in drought mitigation projects. The process should be deliberate so the stakeholders feel like they are part of the project team. The project implementers should create a conducive working environment so stakeholders can contribute through all project stages. Caball and Malekpour (2019) warn that if relevant entities are ignored at any stage of the project, there is a danger of the project being challenged or stopped, for example, due to lack of authorization, resulting in wastage of time and finances. Engaging the stakeholders ensures no critical consideration is given in project planning, implementation, and maintenance.

Monitoring stakeholder engagement involves deliberately and continuously following up on all stakeholders to ensure that they are making the required contributions towards the success of the drought mitigation project at the right time. Bahadorestani et al (2020), assert that monitoring stakeholder engagement involves evaluating and comparing the stakeholder management plan with the results from engaging stakeholders. A change request is initiated if stakeholder engagement is not taking place as intended. This thus acts as a control technique to make sure the project is on track, with the required deliverables, and is accepted by the project users or beneficiaries. Monitoring stakeholder engagement highly depends on effective communication between the project manager and all the relevant stakeholders (Bahadorestani et al., 2020). The stakeholders should be accessible to communicate their concerns and facilitate decision-making promptly. Projectors can also identify stakeholders who might derail the completion of the project or influence other stakeholders negatively. Such stakeholders are reached out to and further retrained on the project's benefits and taught how their actions will affect the success of the drought mitigation projects.

Stakeholder management activities like stakeholder identification, stakeholder training, stakeholder engagement and monitoring stakeholder engagement are undertaken to ensure that drought mitigation projects implemented in arid and semi-arid lands are successful. That is, to deliver the desired output, outcome, and impact.

According to Eskerod and Jepsen (2021), stakeholder management is essential in ensuring that the objectives of any project are realized. According to When *et al.* (2020), effective stakeholder management leads to the realization of short-term, medium-term, and long-term results of a drought mitigation project include covering crops, ensuring water availability for domestic use, and ensuring food security.

II. Performance of drought mitigation projects in Makueni

Makueni County, situated in the defunct Kenyan Eastern Province with a population of 987,653 (2019 census), faces significant challenges due to recurring droughts. Spanning 8,008.9 km², the county bordering Machakos, Kitui, Taita Taveta and Kajiado. Notoriously known for its susceptibility to drought, the Makueni county government has been at the forefront of implementing drought mitigation projects. Between 2015 and 2018, various initiatives to alleviate drought impacts were launched in the region. Notably, according to the Makueni County Government, projects such as drought-resistant crop cultivation and cover crop initiatives gained traction. Additionally, as identified by Kalungu *et al.* (2021), water harvesting projects were pivotal in addressing waterscarcity in the county. Despite these efforts, a critical examination reveals that some drought mitigation projects, as highlighted by Mbatha (2021), need to deliver sustained and effective results, particularly in ensuring reliable, safe water for households, agricultural sustainability, and livestock farming. Project failures are often linked to ineffective stakeholder management. The participation of diverse stakeholders, including Makueni County Government, local communities, non-governmental organizations, and government agencies like National Drought Management Authority and the National Environmental Management Authority (NEMA).

National Drought Management Authority, has been integral to implementing these projects, as posited by Abuya (2021). Kivuva's study in 2022 emphasized that only a few drought mitigation projects in Makueni County achieved the desired impact. For instance, initiatives like rainwater harvesting, riparian land conservation using cover crops, and terrace construction positively affected farmers' livelihoods, better nutrition, and enhanced food security. However, Musyimi *et al.* (2019) caution that most projects yield short-term outcomes, falling short of the long-term performance levels stakeholders envision. This raises concerns about the sustainability and enduring impact of drought mitigation efforts in Makueni County. In light of these findings, understanding the function of stakeholders in influencing the management of drought mitigation projects becomes crucial for developing strategies that ensure the long-term success and resilience of these initiatives in Makueni County, Kenya.

B. Statement of the Problem

In Makueni County, Kenya, recurrent drought conditions have led to significant challenges for the local population, particularly impacting agriculture and livestock production (ABUYA & N. 2021). Despite various drought mitigation efforts, the region must improve its food, relying heavily on external assistance (Jonah, 2019). These projects involve multiple stakeholders, including the community, County government, donor organizations, and political leaders, who all play crucial roles in project implementation and acceptance. However, despite extensive investment in time, resources, and stakeholder engagement during the feasibility study, many of these drought mitigation projects in Makueni have yet to yield the expected outcomes (Njoka, 2019). The persistence of drought-related challenges highlights a critical research gap. Although literature acknowledges the importance of stakeholder management, there needs to be more empirical evidence on its specific impact on the success of drought mitigation initiatives in Makueni County. This study addressed this gap by investigating stakeholder management techniques and the output of drought mitigation projects in Makueni County. By clarifying the specific objectives and rationale for the study, the study sought to contribute valuable insights that inform more effective approaches to drought mitigation in the region.

C. Objectives of the Study

I. The General Objective of the Study

The primary aim of this research was to evaluate the influence of stakeholder management strategies on the effectiveness of drought mitigation projects in Makueni County, Kenya.

II. Specific objectives.

The specific objectives of the study were;

- i. To determine how stakeholder identification affects the drought mitigation project performance in Makueni County, Kenya.
- ii. To evaluate the extent to which stakeholder training enhances the effectiveness of drought mitigation projects in Makueni County, Kenya.
- iii. To assess the relationship between stakeholder engagement and the performance of drought mitigation projects in Makueni County, Kenya.
- iv. To determine the influence of monitoring stakeholder engagement on the performance of drought mitigation projects in Makueni County, Kenya.

LITERATURE REVIEW**A. Empirical Literature Review****I. Stakeholder identification and performance of drought mitigation**

To establish the best method of identifying project stakeholders, Chung and Crawford(2020) carried out a study titled "The Role of Social Networks Theory and Methodology for project stakeholder management." The study sought to establish how social networks would assist project implementers in achieving successful projects. A cross-sectional research design was used, and data was collected through interviews. The study found out, among other things, that stakeholders can help project implementers establish other stakeholders interested in the project.

Lebel *et al.* (2019) conducted a study titled "The framing and governance of climate change adaptation projects in Lao PDR and Cambodia." The study sought to determine the governance structure of flood and drought mitigation projects. The study was carried out in areas vulnerable to drought and floods in Cambodia. The study found that flood and drought mitigation projects usually have many stakeholders, such as the community, government agencies, donor organizations, political leaders, cultural leaders, and workers. Lebel *et al.* (2019) further establish that stakeholders are identified by their interest in the project.

Salman *et al.* (2021) conducted a study on Managing Stakeholders. The study was informed by the need to establish the Role of Stakeholder-Based Management in Project Success. A correlational research using a quantitative survey was conducted using an Internet-based survey. Project and stakeholder management professionals from 47 countries with a sample size of 384 were involved in the study. The study established that a project's success starts with identifying the stakeholders. Salman *et al.* (2021) found that all stakeholders are interested in the project.

In their study, Gana *et al.* (2022) suggested changing the focus of crisis management to risk management in order to lessen the susceptibility of society to droughts: "Towards the harmonization of water-related policies for managing drought risks across the European Union." This study establishes that stakeholder identification is a process that takes time to involve the right stakeholders from the start. Given that government policy changes and parties' interests in project changes, stakeholder identification may only guarantee successful implementation with a review (Gana *et al.*, 2022).

Juri Linert (2019) studied the criteria of stakeholder identification in the study titled "stakeholder identification." The study established a criterion of classifying stakeholders into three major categories. Primary stakeholders: the users or beneficiaries of the project; secondary stakeholders, the intermediaries such as government authorities; and tertiary stakeholders, the entities that have indirect influence such as financial institutions, civil society, media, and opinion leaders. According to these criteria, Juri Linert (2019) gives higher importance to primary, secondary, and tertiary stakeholders in that order. However, the findings of Salman *et al.* (2021) study show that the significance of stakeholders to a project is purely by the extent to which they would be affected by the project or their ability to impact the success of project implementation.

II. Stakeholder training and success of drought mitigation

Eskerod and Jepsen (2020) wrote a book titled "Project Stakeholder Management." which sought to shed light on how projects can be successful due to project stakeholder contributions. The book outlined that the level of support that the stakeholders accord the project implementers depends on the project's perceived benefits and effects on the stakeholders. Eskerod and Jepsen (2020) also add that the ability to contribute significantly to facilitate effective and efficient drought mitigation project implementation and maintenance based on the stakeholders' knowledge and expertise. Baudoin *et al.* (2019) carried out a research that sought to help the people of South Africa cope with the drought. Baudoin *et al.* (2019) conducted a study titled "Living with drought in South Africa: Lessons learned from the recent El Niño drought period." A longitudinal study was conducted, and the responses of the people of South Africa to drought were observed. The study established that stakeholder training was instrumental in bearing the risks faced by the stakeholders, especially the community, and imparting knowledge and skills to all stakeholders on how the project would affect them. Baudoin *et al.* (2019) further assert that stakeholder training helps the stakeholders know they can contribute or how their contribution would affect the successful implementation and maintenance of the drought mitigation projects.

Dudovskiy (2020) conducted a study titled "Key Stakeholders in Training Transfer and their Roles." The research seeks to establish the roles of stakeholders and the significance of training them. The study established that training is paramount as it makes the stakeholders appreciate the roles they play in the effective project execution. However, Elias (2019), in his study titled "Stakeholder Analysis for Lean Six Sigma Project Management," the legitimacy of a stakeholder's participation is determined by its contract, legal title, legal right, moral right, at-risk status, or moral interest in the benefits and harms that the project will cause.

III. Stakeholder engagement and performance of drought mitigation

Elias (2021) affirms that relevant stakeholders ought to be involved in all stages of the project implementation. Getting timely contributions from the stakeholders helps prevent the project from being stopped for reasons such as entitlement or non-compliance. Franzén *et al.* (2020) conducted a study titled "Institutional Development for stakeholder

participation in local water management.” The study attempted to analyze two Swedish water projects. The study established that the stakeholder engagement process should be deliberate so that the stakeholders feel like they are part of the project team. As such, the project implementers should be ready to listen to the input of all the relevant stakeholders. The study conducted by Caball and Malekpour (2019) investigated how issues and complaints logged by stakeholders should be handled. The study was titled "Decision making under crisis." The study's findings emphasize the need for project implementers to create a conducive working environment where the stakeholders are free to contribute, raise issues, and complain if their interests or concerns need to be factored in. The findings warn that if relevant partners are ignored at a given phase of the project, there is a danger of the project being challenged or stopped, for example, due to lack of authorization, resulting in a wastage of time and finances. Thus, Engaging the stakeholders should be in getting their contributions and handling their issues promptly and amicably.

IV. Monitoring of stakeholder engagement and performance of drought mitigation

Stackpole (2023) conducted a study, "User Manual to Project Management," to establish how performance should be monitored." The study found that monitoring stakeholder engagement should involve deliberately and continuously following up on all stakeholders to ensure that they are making the required contributions toward the success of the drought mitigation project at the right time. It was also established that monitoring stakeholder engagement involves evaluating and comparing the stakeholder management plan with the results. A change request is initiated if stakeholder engagement is not occurring as desired. This thus acts as a control technique to ensure that the project is on the right course, delivered at the right time, with the required deliverables, and is accepted by the project users or beneficiaries.

Monitoring stakeholder engagement highly depends on effective communication between the project manager and all the relevant stakeholders (Caball and Malekpour (2019). The stakeholders should be allowed to communicate their concerns freely and promptly to facilitate decision-making. The project leaders can also identify stakeholders who might derail the completion of the project or influence other stakeholders negatively. Such stakeholders are reached out to and further retrained on the project's benefits and taught how their actions affect the success of the drought mitigation projects (Rajablu, 2019).

V. Performance of drought mitigation projects.

The project's performance can only be known after the project has been completed. Project Performance can be looked at both long-term and short-term. According to Golini *et al.* (2019), the performance of drought mitigation projects can be measured by the output, outcome, and impact. The project implementation process is critical to ensuring that the project will be able to deliver the expected performance levels. A drought mitigation project's outputs, outcomes, and impact justify the resources committed to its implementation (Chard & Freeman, 2018). According to Westcott (2021), project outputs are the physical deliverables of a project. The outcomes vary depending on the nature of the drought mitigation project that has been implemented. For a project to register good performance, the outputs should be known beforehand and act as an essential checklist before a project is considered complete. According to Alta (2019), completed project activities result in outputs, though the outputs are not the main reasons for the implementation. The outputs lead to the outcomes and, subsequently, to the expected impact. For drought mitigation projects, outputs include boreholes, water collection tanks, cover crops, drought-resilient crops, and mulch.

Project outcomes are the changes that are caused due to the project outputs (Westcott, 2021). Just completing the project activities does not guarantee favorable outcomes. The outcomes of a drought mitigation project are more intangible and more complex to measure compared to the outputs. Westcott (2021) further affirms that drought mitigation project outcomes are the reasons for the projects' implementation. According to Rao (2020), for drought mitigation projects, desirable outcomes include; households having constant water supply, animals having water to drink and crops having water for irrigation. According to Nigel (2019), project impact is the long-term, far-reaching consequences of project implementation. A drought mitigation project's impact can be direct or indirect, intended or unintended. Every project is hoped to lead to a positive impact on the direct project and indirect beneficiaries. For drought mitigation projects, the desirable impacts include increased forestation due to crop cover and water availability, better nutrition due to the availability of foodstuffs, economic empowerment due to practicing agribusiness, and reduced dependency on food aid from the government and donor organizations.

RESEARCH METHODOLOGY

A. Research Design

The research employed a descriptive cross-sectional study design. This design was ideal since the researcher was able to collect data to respond to enquiries related to the subject of the study's status. In order to help a researcher characterize a phenomenon, descriptive research ascertained and reported how things were. (Sovacool *et al.*, 2018). The study was conducted over a relatively short period. This method was the best fit for the research because it aided in portraying the accuracy of stakeholder management and the performance of drought mitigation projects in Makueni County.

B. The Target Population

The target population is the specific group of people for whose information is being sought. Ngechu (2020) defines a population as a well characterized group of individuals, services, objects, events, or homes that are the subject of an investigation. Researchers must choose the target population from which they wish to collect data. The units of analysis was drought mitigation projects established in Makueni County for the last Eight years. This was to narrow down to specific and relevant projects, which gave an inaccurate picture of the projects under study. The population for this study was 43 projects across the six sub-counties of Makueni County, and the population of interest is 64 members sampled from project managers to the community and members of NDMA.

C. Sample Size and Sampling Procedure

Sampling is the crucial method of selecting respondents who contribute to the study, aiming to ensure a representative subset of the entire population. Ogula (2021) articulated that sampling involves the deliberate and systematic selection of a subset of the population to participate in a study. Mugendi (2023) suggests that a sample size equivalent to 30% of the target population is considered representative to balance feasibility and representation.

Table 1: Sample size

Projects implemented from 2017-2024	Makueni Sub-Counties	Sample	percentage of the target population
9	Makueni	3	30%
8	Kaiti	3	30%
5	Kilome	2	30%
7	Kibwezi East	3	30%
6	Kibwezi West	2	30%
8	Mbooni	3	30%
43	Total	16	

Source: Author (Makueni County Government)

The researcher used simple random sampling to select the projects included in the sample from each sub-county. After arriving at a sample of 16 projects, the researcher used purposive sampling to identify the specific respondents to be involved in the study. This method allowed individuals who were able to provide relevant data to be included in the study. Four respondents were selected from each project: a project manager, a community member, an opinion leader, and a member of the NDMA from the 16 projects, making a total of 64 respondents. Four respondents from the above categories were included in the study because, according to Lebel *et al.* (2018) the critical stakeholders in a drought mitigation project include the project manager, beneficiaries, opinion leaders, and government agencies.

D. Data Collection Procedure

The procedure for data collection started when the researcher was given a letter of approval by the university to go to the field. A study permit was obtained from NACOSTI using the letter of acceptance. The researcher then introduced herself using a letter of introduction to the selected respondents before administering the semi-structured questionnaires. After a week, the researcher then distributed the questionnaires and collected them for data analysis.

DATA ANALYSIS AND INTERPRETATIONS

A. Response Rate

The study examined 16 drought mitigation projects in Makueni County, Kenya. In each project, 4 respondents were included in the study making a total of 64 respondents. All participants completed the surveys and returned them to the researcher for data processing, resulting in a 100% response rate.

B. Descriptive Statistics

I. Means and Standard Deviations

The means and standard deviations for study variables were computed. The composite values calculated for each variable was used and the findings presented through the table illustrated below.

Table 2: Means and Standard Deviations

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Identification	64	3.14	4.86	4.1830	.55327
Training	64	3.14	4.86	4.1205	.47361
Engagement	64	3.29	4.86	4.0022	.35770
Monitoring	64	3.57	4.86	4.0212	.26811
Project_Performance	64	3.50	4.67	4.0042	.26304
Valid N (Listwise)	64				

n=64

Source: Author (2024)

The study questionnaire used a likert scale that required respondents to indicate the extent to which they agreed or disagreed with the statements that had been identified as measures of the various research variables. The respondents were to choose one of the following for each statement; Strongly Disagree, Disagree, Don't know, Agree, and Strongly Agree. Table 2 presents the means of the responses calculated for stakeholder identification, stakeholder training, stakeholder engagement, stakeholder monitoring and performance of drought mitigation projects in Makueni county as; 4.1830, 4.1205, 4.0022, 4.0212 and 4.0936 respectively. The average means of above 4.00 showed that project stakeholders had confidence that the stakeholder management helped in enhancing the performance of drought mitigation projects in Makueni County.

Table 2 also presents the standard deviations in the responses given for the scales used for research variables. The standard deviations for stakeholder identification, stakeholder training, stakeholder engagement, stakeholder monitoring and performance of drought mitigation projects in Makueni county; .55327, .47361, .35770, .26811 and .27934. The analysis revealed low standard deviations which suggested that the values were close to the means of the data sets. It was thus interpreted that most of the respondents agreed with the statements that were used to measure stakeholder identification, stakeholder training, stakeholder engagement, stakeholder monitoring and performance of drought mitigation projects in Makueni county.

C. Normality Tests

According to Biswas & Bisaria, (2020), normality is observed from among other things, asymmetrical bell shaped curve of the frequencies. Normality tests were important as they helped the researcher determine whether to use parametric or non-parametric for further data analysis. Normality tests were carried out for the data on the dependent variable, performance of drought mitigation projects in Makueni county.

I. Test of Normality Using a Histogram

Figure 1 revealed a symmetrical distribution with high frequencies at the middle and reducing frequencies towards the edges. There were therefore no extreme outliers in the data set as all the responses given. The distribution histogram suggested that the data was drawn from a normal population permitting the use of parametric tests in further data analysis.

In order to determine whether the data was drawn from a normally distributed population, the study made use of a histogram as illustrated in the figure below.

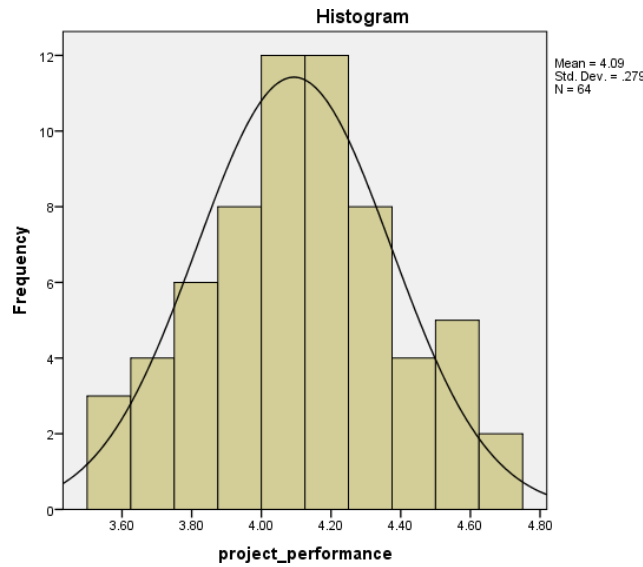


Figure 1 Distribution HistogramSource: Author (2024)

II. Test of Normality Using the Quantile-Quantile Plot

To confirm the findings of the distribution histogram on normality, the researcher used a Quantile-Quantile (QQ) Plot. A Q-Q plot is useful in establishing the existence of outliers in a data set. The resulting Q-Q plot produced was as shown below.

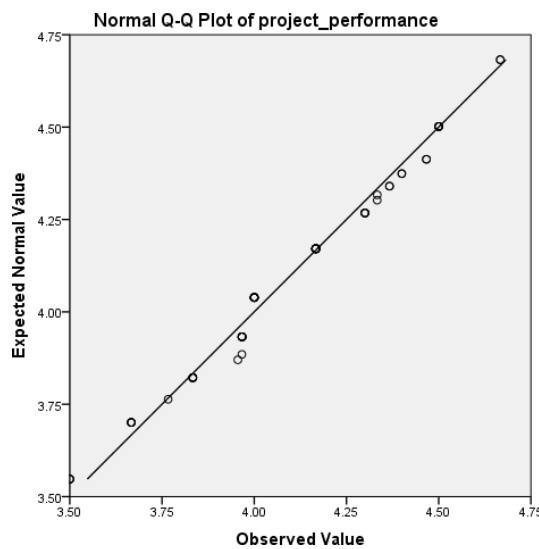


Figure 2 Quantile-Quantile PlotSource: Author (2024)

Figure 2 shows a QQ plot which plots the expected normal against the observed normal. The findings affirm that the data is drawn from a normally distributed population since all the plotted data points are near the line of reference and existence of extreme outliers is ruled out.

D. Relationship Between Stakeholder Management and Performance of Drought Mitigation Projects in Makueni County

The study endeavored to establish the relationship between Stakeholder Management and Performance of Drought Mitigation Projects in Makueni County. Correlation analysis was used to find out the relationship between independent variables and the dependent variable. The correlation was between the independent variables; stakeholder identification, stakeholder training, stakeholder engagement, stakeholder monitoring and the dependent variable; performance of drought mitigation projects in Makueni county.

Table 3: Relationship Between Stakeholder Management and Performance of Drought Mitigation Projects in Makueni County

		Correlations				
		Project_ Performance	Identification	Training	Engagement	Monitoring
Project_ Performance	Pearson Correlation	1	.789**	.502**	.678**	.776**
	Sig. (2-Tailed)		.000	.000	.000	.005
	N		64	64	64	64
Identification	Pearson Correlation		1	.203	.234	.321
	Sig. (2-Tailed)			.048	.123	.046
	N			64	64	64
Training	Pearson Correlation			1	.321	.252
	Sig. (2-Tailed)				.123	.067
	N				64	64
Engagement	Pearson Correlation				1	.237
	Sig. (2-Tailed)					.122
	N					64
Monitoring	Pearson Correlation					1
	Sig. (2-Tailed)					
	N					

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

Source: Author (2024)

The findings presented in Table 4.8 reveal that all the stakeholder management strategies had a positive correlation with performance of drought mitigation strategies in Makueni county. The correlation between stakeholder management and performance of drought mitigation projects in Makueni county were as follows; stakeholder identification ($r=.789, p=.000$), stakeholder training ($r=.502, p=.000$), stakeholder engagement ($r=.678, p=.000$) and stakeholder monitoring ($r=.776, p=.005$). At 0.05 significance level, stakeholder identification, training, engagement and monitoring were significantly correlated to performance of drought mitigation projects in Makueni county since they had a $p<.05$. However, despite the positive correlation between stakeholder training and performance of drought mitigation projects in Makueni county, the correlation was weak since $r=.502$.

The findings in Table 4.8 reveal that as stakeholder identification, training, engagement and monitoring were enhanced, performance of drought mitigation projects in Makueni county also improved. It was further identified that stakeholder identification and monitoring had the greatest impact on the performance of drought mitigation projects in Makueni county. Stakeholder training had the least impact on the level of performance of drought mitigation projects in Makueni county. The findings of this study are in-line with the findings of Lebel *et al.* (2020) who posited that stakeholder identification and monitoring are most critical in ensuring performance of drought mitigation projects. Lebelet *et al.* (2020) had established that having the right stakeholder and continuously monitoring them as key in attaining project deliverables.

E. The influence of Stakeholder Management on Performance of Drought Mitigation Projects in Makueni County

I. Significance of the Model

The research objectives were to establish whether there was a significant relationship between the four predictor variables of stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring and the dependent variable of performance of drought mitigation projects in Makueni County. To achieve this, multiple regression analysis was carried out using SPSS V21. Pitarch *et al.*, (2019) recognises multiple regression as the best method of explaining the extent to which independent variables influence the changes in the dependent variable in a study.

The findings in Table 4.9 shows that the overall regression model was significant, $p<.001$, and the regression equation predicts the dependent variable, performance of drought mitigation projects in Makueni county. This implies that changes in the level of performance of drought mitigation projects can be explained by the changes in the levels of stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring.

Table 4.9: Analysis of Variance

Model	ANOVA ^a					
	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	.111	4	.028	3.42	.000 ^b
	Residual	4.805	59	.081		
	Total	4.916	63			

a. Dependent Variable: project_performance

b. Predictors: (Constant), monitoring, identification, engagement, training

Source: Author (2024)

II. The Strength of the Relationship Between Stakeholder Management and Performance of Drought Mitigation Projects in Makueni County

To find out how stakeholder management affects the performance of drought mitigation projects in Makueni county, the researcher conducted a multiple regression analysis and the model summary was as illustrated below.

Table 4: Model Summary

Model	R	Model Summary		
		R Square	Adjusted R Square	Std. Error of the Estimate
1	.863 ^a	.744	.726	.26375

a. Predictors: (Constant), identification, training, engagement, monitoring

Source: Author (2024)

Table 4 reveals that stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring are significant predictors of performance of drought mitigation projects in Makueni county. Table 4 also shows an adjusted $R^2 = .726$, taken as set predictors of stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring account for 72.6% of the variance in performance of drought mitigation projects in Makueni county. It is therefore interpreted that 72.6% of the changes in the level of performance of drought mitigation projects in Makueni county can be explained by the changes in stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring. As such, the stakeholder management was an effective way of enhancing performance of drought mitigation projects in Makueni county.

III. Regression Coefficients

The researcher used the regression coefficients table to ascertain the influence of each predictor in the model. The data was presented in Table 4.11 below.

Model	Coefficients ^a							
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics		
	B	Std. Error				Beta	Tolerance	VIF
1	(Constant)	4.606	.821	.130	5.611	.000	.908	1.200
	Identification	.576	.065	.037	1.009	.000	.821	1.303
	Training	.222	.077	.015	2.283	.000	.804	1.342
	Engagement	.412	.101	.067	3.117	.005	.823	1.232
	Monitoring	.569	.135		2.513	.005		

a. Dependent Variable: project_performance

Table 4.11 shows that all the three predictors (stakeholder identification, stakeholder training, stakeholder

engagement and stakeholder monitoring) offer significant amount of unique variance in explaining the dependant variable (performance of drought mitigation projects in Makueni county). All the four predictors had a $p < .05$; stakeholder identification ($p < .001$), stakeholder training ($p < .001$), stakeholder engagement ($p = .005$), and stakeholder monitoring ($p = .005$). Collinearity statistics in table 4.11 show a tolerance of $> .800$ indicating that there was no multicollinearity. Tolerance of .908, .821, .804 and .823, indicated that 90.8%, 82.1%, 80.4% and 82.3% of the variance in stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring are unique to the specific predictors in stakeholder management and are not accounted for by the other predictors. It is therefore interpreted that there is no significant relationship among the independent variables. The statistics therefore and in line with the findings in the correlation statistics presented in table 4.8 where for instance the correlation between stakeholder identification and stakeholder training was $r = .203$ $p = .048$. Variance Inflation Factor (VIF) was also used to rule out instances of multicollinearity. Table 4.11 shows VIF values of 1.200, 1.303, 1.342 and 1.232, for stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring respectively. A VIF of below 10.0 shows that the model is fit for the data and therefore acceptable (Mohamad *et al.*, (2019). Multiple linear regression was derived as shown in the regression equation below;

Performance of drought mitigation projects in Makueni county = $(4.606) + .576(SI) + .222(ST) + .412(SE) + .569(SM)$

Where; SI=Stakeholder Identification, ST=Stakeholder Training, SE=Stakeholder Engagement and SM=Stakeholder monitoring. It is therefore revealed that Stakeholder Identification has the greatest impact on the performance of drought mitigation projects in Makueni county while stakeholder training has the least impact on performance of drought mitigation projects in Makueni county. The findings of this study agree with Bahadorestani *et al.*, 2020 who established that stakeholder management was the major determinant of the success and performance of drought mitigation projects.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A. Summary of Findings

The performance of drought mitigation projects has been a concern in Makueni County, Kenya just like it has been in the rest of the world. The study established that; even though both genders were involved in drought mitigation projects, these projects were greatly supported by women in Makueni County as compared to the male counterparts. The findings also showed that a majority of the respondents only had basic education. Therefore, drought mitigation projects lacked fresh and innovative ideas to sustain them and ensure that they are able to address the effects of drought in the region. The various age groups complemented each other to ensure sustainability of the drought mitigation projects. The mid age people participated more in numbers, the younger people contributed innovative ideas while the elderly brought in their experience over time to support and ensure performance of drought mitigation projects in Makueni county.

The study revealed that Bore Hole, Cover Crops, Dams and Water Harvesting drought mitigation project were popular in Makueni County. The community therefore seemed not to understand the critical role that other types of projects such as water catchment which would result to long term benefits. A majority of these projects had existed for a period of between 4 and 5 years. This implied that, there has been certain levels of project performance that had been realized which led to sustainability and continuation of the projects over the years. The findings further showed that there existed a strong positive correlation between the independent variables; stakeholder identification, stakeholder training, stakeholder engagement, stakeholder monitoring and the dependent variable; performance of drought mitigation projects in Makueni county. This meant that if better stakeholder management was done then there was better performance in the drought mitigation projects in Makueni county. The findings reveal that as stakeholder identification, training, engagement and monitoring were enhanced, performance of drought mitigation projects in Makueni county also improved. It was further identified that stakeholder identification and monitoring had the greatest impact on the performance of drought mitigation projects in Makueni county. This reveals that stakeholder identification and monitoring are most critical in ensuring performance of drought mitigation projects. Having the right stakeholder and continuously monitoring them is key in attaining project deliverables.

Regression analysis showed that stakeholder identification, stakeholder training, stakeholder engagement and stakeholder monitoring are significant predictors of performance of drought mitigation projects in Makueni county. Changes in the level of stakeholder engagement brought about significant changes in the levels of the performance of drought mitigation projects in Makueni County. Therefore, stakeholder management was an effective way of enhancing performance of drought mitigation projects in Makueni county.

B. Conclusion

A wide range of drought mitigation projects have been implemented in Makueni county. The stakeholders have been drawn from different demographics with different ages and levels of education who have complemented each other in enhancing project performance. Bore Hole, Cover Crops, Dams and Water Harvesting drought mitigation projects were popular in Makueni County. These projects have generally performed well and served the community for an

average of above four years. There is a strong relationship between stakeholder management and the drought mitigation performance of the drought mitigation projects in Makueni county. Improvement of stakeholder management led to improved performance of drought mitigation projects. Changes in the level of stakeholder engagement brought about significant changes in the levels of the performance of drought mitigation projects in Makueni County. Therefore, stakeholder management was an effective way of enhancing performance of drought mitigation projects in Makueni county.

C. Recommendations

Based on the findings of the study, the following recommendation are drawn; It is recommended that stakeholders identification to be carefully done in order to bring on board participants who are in a position to inject new and innovative ideas that would help to further improve the performance of drought mitigation projects in Makueni County. Training should be done continuously especially because a significant number of the stakeholder lacked high academic qualification or training in drought mitigation projects management. The training will ensure that the stakeholders understand the importance of drought mitigation projects such as water catchment which may have long time benefits to the community. The researcher also makes a recommendation for further research on other aspects that also impact on the performance of drought mitigation projects.

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