MONITORING AND EVALUATION PRACTICES AND PERFORMANCE OF WATER AND SANITATION PROJECTS IN LANGATA SUB COUNTY, NAIROBI COUNTY, KENYA

Daisy Florence Aoko

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DECLARATION AND APPROVAL

Declaration by the Student

This research project is my original work and has not been presented for a degree in any other University.

Signature  Date 03/02/2023

Name: Daisy Florence Aoko

Reg No: MAME/2022/48479

Declaration by the Supervisor

I confirm that the work reported in this project was carried out by the candidate under my supervision:

Signature  Date 05/02/2023

Dr. Nyandoro Kefa

School of Social Sciences

Mount Kenya University

DEDICATION

I dedicate this work to my mother, Caroline Oduor, father, Andrew Otieno, brother, Braxton Nic, and husband, Kevin Mutai who offer invaluable support throughout this journey.

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I wish to thank the Almighty God for his love and amazing grace that has seen me throughout this period of pressure when undertaking this project. I also wish to thank all the staff of Mount Kenya University for their support during the period when I was undertaking my coursework. I am also grateful to my supervisor Dr Kefa Nyandoro for his kind guidance and support to me while undertaking the research work. My thanks also go to my family who has been patient and understanding as I undertook my project writing. God bless you.

ABSTRACT

The provision of clean water and adequate sanitation is essential for sustaining human life, health, happiness, and decency. In all environments where individuals live, learn, play, work, rest, and seek medical attention, a gradual strategy is needed to ensure that sanitation and drinking water operations are safe, equitable, accessible, available, and affordable for everyone. Approximately 13,000 kids under the age of five die every year from illness linked to a lack of access to clean water, inadequate sanitation, and poor hygiene, adding up to an estimated 484,000 children worldwide who are affected by these conditions. This study aims to assess the effect of monitoring and evaluation practices and performance of water and sanitation projects in Langata Sub County, Nairobi County in Kenya. This research proves how crucial monitoring and evaluation procedures are to the success of water and sanitation initiatives in Nairobi and other parts of Kenya. It allows practitioners to determine the most suitable practices for water and sanitation projects. The findings of this study can be used by project managers to implement various state initiatives, thus enabling them to identify the key areas for improvement to ensure long-term project optimization. Ultimately, also contributes to the closure of the knowledge gap regarding the effect of monitoring and evaluation practices on the performance of water and sanitation projects. Therefore, the main significance of this project is the fact that it enhances how people understand the most effective strategies for addressing global water and sanitation concerns. The study sought to achieve four specific objectives; to assess the effect of the baseline survey, M& E planning, budgetary allocation for M & E, and evaluation scheduling on the performance of water and sanitation projects in Langata Sub County. The study used a descriptive study design. It utilized an explanatory survey research design to examine the interconnection between the predictor and predicted variables in the context of monitoring and evaluation and how they influence the performance of water and sanitation projects in the geographical area of Langata sub-county in Nairobi, Kenya. This explanatory survey approach enables the study to elucidate the underlying mechanisms driving this relationship and explore other potential associations among the study variables. The study was conducted in Langata Sub County, Nairobi County, targeting officers providing water and sanitation services. The study targeted all 245 officials managing several water and sanitation projects by the county government of Nairobi. The study used a semi-structured questionnaire and interview schedule to collect data. The questionnaire was tested to ascertain its validity and reliability before the data collection exercise. The collected data was analyzed in SPSS. The

findings were presented using charts and tables. The study found that Baseline Studies had a statistically significant positive relationship with perceived performance, with a coefficient of 0.257 and a significance level (Sig.) of 0.012. Similarly, the structural framework shows a significant positive relationship (coefficient = 0.490, Sig. = 0.000) with perceived performance. In the case of planning, the study revealed a statistically significant positive relationship, with a coefficient of 0.210 and a significance level of 0.035. Furthermore, Scheduling also demonstrates a positive relationship, boasting a coefficient of 0.204 and a significance level of 0.024, thus indicating statistical significance. The study concludes that baseline data practices, M&E planning practices, adherence to the structural framework, and M&E scheduling had significant contributions to the performance of water and sanitation projects. The study's theoretical framework draws upon two main theories: program theory and results-based management (RBM). Program theory, as described by Patton (2002) and supported by scholars such as Huey Chen, Peter Rossi, Michael Quinn Patton, and Carol Weiss, is focused on comprehending the process through which change is implemented within programs and the drivers responsible for this change. RBM, on the other hand, originated in the 1980s and became increasingly popular in the next decades. This approach focuses on the achievement of sustainable outcomes through clear goal-setting, monitoring, and evaluation.

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LIST OF ABBREVIATIONS AND ACRONYMS

ASARECA : Association for Strengthening Agricultural Research in Eastern and Central Africa

IFRC : International Federation of Red Cross and Red Crescent Societies

M&E : Monitoring and evaluation

MBO : Management by Objectives

NACOSTI : National Commission for Science, Technology and Innovation

NPM : New Public Management

OECD : Organisation for Economic Co-operation and Development.

RBM : The Results-based management

RBMG : The Results-Based Management Group

SDGs : Sustainable Development Goals

TQ M: Total Quality Management

UN : United Nations

UNDP : United Nations Development Programme

UNESCO : United Nations Educational, Scientific and Cultural Organization

UNICEF : The United Nations Children's Fund

USAID : United States Agency for International Development

USD : United States dollar

WHO : World Health Organisation

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

To attain a healthy population, contentment, and dignity, clean water, and sufficient sanitation must be provided. Everybody's fair access to sufficient amounts of clean drinking water and sanitation services is one of the fundamental human rights (United Nations, 2015). To make sanitation and drinking water operational processes secure, reasonable, convenient, available, and reasonably priced for every person in all settings where people live, learn, play, work, rest, and receive medical care, a gradual approach is required (United Nations, 2015; UN-Habitat & WHO, 2010). The Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development (2030 Agenda) place a strong emphasis on water (United Nations, 2015b).

Globally, there are about 2.2 billion people without safe drinking water and proper sanitation. More than half of the world's largest population does not have access to sanitary facilities. The ability to wash their hands with soap is unavailable to three billion people. Because there aren't enough suitable sanitation and drinking water projects, more than 700 children under the age of five die from waterborne illness every day. Approximately 13,000 kids under the age of five die each year from diseases associated with a lack of access to clean water, insufficient sanitation, and poor hygiene, adding up to an estimated 484,000 children worldwide who are affected by these conditions (United Nations Children's Fund) (2017). It is estimated by 2030, 1.6 billion individuals will not have access to safe drinking water. Equally, 2.8 billion will not have access to proper sanitation facilities (United Nations, 2022).

The goal of vision 2030 is to guarantee that everyone has access to better water and sanitation (World Health Organization, 2009; Zolnikov, 2018). Even though some regions of the world are making positive strides toward achieving these objectives, significant disparities still exist. In large parts of Asia, where approximately 675 million individuals lack access to better drinking water sources, this issue is still very problematic (UNICEF et al. 2004). When population growth is taken into account, it is implied that to achieve the MDG for sanitation alone, 2.1 billion individuals must have access to sanitation between 2002 and 2015. It took at least 44,300 facilities per day for the following 13 years that deliver toilets for 2.1 billion persons. Order to achieve the most basic level of sanitary circumstances throughout the next 13 years would necessitate an investment of $4.4 million U.S. dollars each day, assuming that basic dry sanitation installations cost $100 each (UN Millennium Project 2005).

In Sub-Saharan Africa, only 36% of people have access to basic sanitation (UNICEF et al. 2004). Rapid urbanization in these emerging economies is commonly accompanied by excessive water demand and unauthorized interconnection to distribution channels in underprivileged neighborhoods. There are various leaks and fractures in processes; which could easily be attended to with the proper implementation of M&E practices. Around 45 million cubic metres of water per day, with a yearly economic value of over $3 billion, are lost in emerging economies (World Bank, 2016). Widespread power failures cause the pipes to have low or negative stresses, which makes it possible for water contamination or sewerage to enter the water lines through every fracture. Cross-contamination in the distribution network has been linked with several of the world's biggest substantiated waterborne illnesses in the past two decades, including typhoid and cholera (Pallavi, & Shivaraju, 2019; Ibrahim, &

Ahmad Sabri, 2018). The challenges brought on by water contamination must be lessened with the aid of monitoring and evaluation of the water supply and sanitary conditions.

Today, only about 50% of Kenya's urban residents have access to water. Only 40% of Nairobi is associated with a sewer system and less than a third have access to better sanitation (World Bank, 2020). As Nairobi has expanded, an increasing number of urban poor individuals have been forced into low-income, informal housing with scant to no access to water and sanitation. Utilizing commercial and consumer funding to promote investment projects, the Nairobi Sewage treatment Project, funded by the World Bank and installed from 2012 to 2018, worked to improve the accessibility of sanitation and drinking water for individuals living in urban settlers. However, in several incidences, Langata Sub County has been one of the areas most affected by poor water and sanitation services over the last decade.

A substantial portion of the national budget for a developmental programme is spent on monitoring activities. Instances of these operational processes include publishing propositions, trying to establish initiatives, and trying to establish constructs, as well as putting together action plans, collecting information, creating reports, and maintaining knowledge management through the relevant data. With regular project monitoring, an organisation that has clear, complete and accurate operational and strategic goals advances the most (Kihuha, 2018). Clarke continues by saying that the implementation plans it far simpler to comply with disclosure requirements and substantively evaluate their progress. Research with planning and monitoring processes was enjoyable for organisations that understood and implemented them (Kihuha, 2018).

Procedures for monitoring and evaluating activities are kept track of to see what is being done and if the project or programme is having an impact. With the aid of these structures, programme management can identify how best to spend their resources for the best outcomes (Adugna, 2021). One of the crucial components that helps the project management if the initiative is proceeding according to plan is monitoring and evaluation. They provide the government with the data needed to make decisions. No matter the size of the project, monitoring and evaluation (M&E) is crucial because it identifies areas that require improvement (Abalang, 2016).

In order to guarantee the project's success, suitable M&E practices are essential. Several M& E practises, including baseline studies, planning, an M&E structural framework, an M&E budget, scheduling, information and communication technology, and midterm and end evaluation, are included in the subject matter of this study (Ayenew, 2021; Mengistu, 2020). M&E practises are those that have been proven to be successful in boosting the success of a project. Professionals have viewed these methods as a successful way to integrate M&E into projects (Kimweli, 2013). In M&E procedures, baseline studies are utilized to gather essential data about something like a project (Shihemi, 2016). Then, using this data, a relative methodology is developed to assess the project's overall effect (USAID, 2010). The second practice focuses on the preparation for the assumptions upon which the project's objectives are based.

The M&E planning process is also essential to the success of the project. It is divided into relevant factors related to finances, capacity, viability, schedule, and ethics by Kissi et al. (2019). The M&E structural framework, which is the third practice, aims to identify the justification for evaluating the performance and project aspects, how they are connected, and

their core assumptions (Abrahams, 2015). The fourth technique is the M&E budget (Kimaro, Fourie & Tshiyoyo, 2018). The program's cost estimate should contain a precise and adequate budget allocation for the operational processes to carry out proper M&E. (Abrahams, 2015). Planning effectively guarantees that residual resources are made available for the project, resources are obtained accurately, the workforce is trained for the task, practical and core objectives are set, and functional timelines for delivery are outlined, among other things (United Nations Evaluation Group [UNEG], 2017). According to UNDP (2016), ineffective monitoring and evaluation procedures are to blame for approximately 74% of project monitoring and evaluation failures.

For the overall process to be implemented successfully, budgeting for M&E operations is essential. Most organisations never allocate funds for monitoring and evaluation practices, and copying and pasting M&E processes has a detrimental impact on the operations phase, which ultimately fails the entire exercise (Jili, & Mthethwa, 2016). An inadequate budget for M&E and the complexity of establishing performance measures are two issues that the project monitoring function frequently encounters (Kontinen & Robinson, 2014). The project's ability to succeed is impacted when M&E faces budgetary challenges during execution.

Scheduling represents the fifth M&E technique. Mekonnen (2017) asserts that M&E must be organised to ensure that it expects to receive the consideration it needs and is not subject to the programme management's choices. Scheduling is followed by choosing how frequently data is collected. There must be a clear definition of how frequently M&E data collection should take place, according to Kissi et al (2019). The exercise is essential to ensure better project monitoring to lead the project in performance improvement. As a result, the purpose of this research is to assess the impact of monitoring and evaluation practises on the

performance of water and sanitation projects in Langata Sub County and Nairobi County in Kenya.

1.2. Statement of the Problem

There are about 2.2 billion people without safe drinking water and proper sanitation and this number is likely not to have a significant change by 2030. It is estimated by 2030, 1.6 billion individuals may not have access to safe drinking water. Similarly, 2.8 billion will not have access to proper sanitation facilities (United Nations, 2022). Approximately 13,000 kids under the age of five die every year from illness linked to a lack of access to clean water, inadequate sanitation, and poor hygiene, adding up to an estimated 484,000 children worldwide who are affected by these conditions (United Nations Children's Fund) (2017). Only 36% of people in Sub-Saharan Africa have access to basic sanitation (UNICEF et al. 2004). The goal of vision 2030 is to guarantee that everyone has access to better water and sanitation (World Health Organization, 2009; Zolnikov, 2018). It will take at least 44,300 facilities per day for the following 13 years that provide toilets for 2.1 billion people. One of the crucial steps in the project management cycle is M&E the progress of the project. Successful international progressive projects depend on a routine or ongoing process of data collection to assess the extent of performance relative to targets and objectives. In controlled environments, M&E greatly enhance project outcomes (Westland, 2006). Limitations in the use of M&E as a part of a project's management cycle are responsible for poor organizational performance. Performance of water and sanitation projects is geared by the introduction of new instruments, methods, and strategies for project M&E. Conclusive proof of the project's success in meeting its objectives is required by interested parties. In response to this expectation, project

management adopts different approaches to monitoring and evaluation to realize implementation or operational project performance.

In many cases, M&E procedures are enforced as a donor demand, with 10% of the total project budget set aside for M&E purposes. Only a few projects have examined particular facets of M&E practice and their impact on project effectiveness. The majority of studies on this idea are generic. Only Kenyan projects with donor funding are considered in the evaluation of specific M & E practises, including process planning, technical expertise, stakeholder participation, management participation, and impact on project achievement. To comprehend the successes or failures of addendum developments and to make decisions about how to enhance project outcomes, a review of these M & E practices is essential. This study seeks to fill the existing gap by analysing the effect of monitoring and evaluation practices and the performance of water and sanitation projects in Langata Sub County in Nairobi County, Kenya.

1.3. The General Objective Of The Study

The purpose of this study is to assess the effect of monitoring and evaluation practices and performance of water and sanitation projects in Langata Sub County, Nairobi County in Kenya.

1.3.1. Specific Objective of the study

The study was guided by the following specific objectives:

i. To assess the effect of the baseline survey on the performance of water and sanitation projects in Langata Sub County.

ii. To determine the effect of M& E planning on the performance of water and sanitation projects in Langata Sub County.

iii. To establish the effect of budgetary allocation for M & E on the performance of water and sanitation projects in Langata Sub County.

iv. To determine the effect of evaluation scheduling on the performance of water and sanitation projects in Langata Sub County.

1.4. Research Questions

The study attempted to answer the following:

i. What is the effect of baseline studies on the performance of water and sanitation projects in Langata Sub County?

ii. How does the planning process affect the performance of water and sanitation projects in Lang'ata Sub County?

iii. What is the effect of budgetary allocation on the performance of water and sanitation projects in Langata Sub County?

iv. How does scheduling affect the performance of water and sanitation projects in Langata Sub County?

1.5. Justification of Study

According to UNICEF and WHO estimates, 1.1 billion people do not as of now have access to better water supplies, and 2.6 billion do not have enough sanitation. In order to achieve the MDGs, adequate financial resources, long-term technological advancements, and brave

politics are needed. The United Nations (U.N.) estimates that more than 14,000 people per day pass away from diseases transmitted by water.

Children are especially at risk from polluted water and poor sanitation. There are twice so many related deaths and impairments among kids under the age of 14. As well as 90% of the 5,000 children who pass away each day from diseases caused by contaminated water and poor sanitation do so before turning five.

Due to poor data collection and inadequate study on several water and sanitation-related concerns, the WHO chooses to believe the influence of dirty water and unsanitary practices is understated. The WHO predicts that global phenomena like climate change may increase deaths and morbidity linked to water and sanitation by fostering surroundings for disease-carrying pests and supporting the spread of water-related diseases, which can be discussed by enhancing access to clean water and proper sanitation. In several incidences, Langata Sub County has been one of the areas most affected by poor water and sanitation services over the last decade.

1.6. Significance of the study

Today, only about 50% of Kenya's urban residents have access to water. Only 40% of Nairobi is associated with a sewer system and less than a third have access to better sanitation (World Bank, 2020). The research provides proof of how crucial M & E procedures are to the success of the water and sanitation initiatives in Nairobi City County. It makes it easier to determine which practice significantly affects how well water and sanitation work.

The study gathered data on project monitoring and evaluation for analysis to determine how M & E procedures can lead to better project performance. The study findings may be used by project managers in the implementation of state initiatives. They may determine any current gaps in M & E practice and spot any areas that may be used for advancement to boost project results. The research may significantly advance understanding of the relationship between M&E practice and the effectiveness of water and sanitation projects in Nairobi County.

Eventually, the study's findings help to close the knowledge gap regarding the M & E of water and sanitation project performance. The survey's conclusions may be a useful addition to the research on project management.

1.7. Scope of the Study

It relates to the limits wherein the investigation is conducted (Miller & Stebbins, 2020). This entails defining the area of research and precisely outlining what the investigator is examining, as well as the variables that fall within acceptable limits (Leedy & Ormrod, 2019). This could imply defining the participants, the degree of ideological inclusion in the research goals, and the timeline in order to place the study's scope in perspective. In this context, the survey's scope is a description of broadness, intensity, and specifics to guarantee breadth, complexity, and elaboration compatible and satisfactory to resolve the outlined research goals within the time allotted and in a way that maximizes resources.

i. On time scope, the study was conducted from March 2023 through April 2023.
ii. On the geographical scope, the study targeted water and sanitation projects by Nairobi water and Sanitation Company and in Nairobi County.

iii. The study investigated the effect of Monitoring and evaluation practices on the performance of water and sanitisation projects in Nairobi County. The study assessed the effect of baseline studies, planning process, budgetary allocation, evaluation scheduling and the performance of the water and sanitation projects. Data was collected using a structured questionnaire targeting a sample of 103 project officials for the Water and sanitation projects by the Nairobi County government. s

1.8. Limitations of the study

Study limitations are features embedded in the study design or framework that alter the significance and analysis of the study outcome (Greener, 2018). The present study may face several limitations during implementation. The target audience consists of women with diverse social and economic characteristics and some may have a tight work schedule.

i. The researcher expects difficulty in securing time with the targeted participants to answer the survey questions. To compensate for this disadvantage, the meeting was arranged between the researcher and participants on a day and time which are comfortable for the participants.

ii. Some of the instrument's components may also be resisted by some of the selected participants. This is because management processes are very sensitive matters that, if communicated carelessly, might undermine the organization’s competitive advantage. As a result, the investigator provided a personal commitment letter assuring that the data was handled with the utmost confidentiality and would not be shared with third parties.

iii. To assure participants that their information would be used strictly for academic purposes, authorizations from Mount Kenyatta University and the National Commission for Science, Technology and Innovation (NACOSTI) were attached.

1.9. Delimitation of Study

i. The study was delimited in the examination of monitoring and evaluation practices; baseline studies, planning of M&E, budgeting for M&E, and scheduling of evaluation on water and sanitation for projects by the Nairobi county government.

ii. The study was delimited in the study of all water and sanitation projects under county government of Nairobi

iii. The study was delimited in measuring the performance of water and sanitation projects by the County government of Nairobi, in Langata Sub County.

1.10. Assumptions of the study

"Assumptions are so fundamental that the research question itself cannot arise without assumptions," (Leedy & Ormrod, 2019) asserted In a study, assumptions are circumstances that are out of the researchers' influence, but without them, the research could be meaningless. This study assumes that;

i. All respondents provided honest and accurate information upon which the study draws an independent conclusion.

ii. The study also assumed that there was enough time to collect sufficient data.

iii. The study also assumed that the targeted project management officials would be willing to take part in the study.

iv. Finally, the study assumed there existence an association between monitoring and evaluation practices and the performance of water and sanitisation projects by the Nairobi County government.

1.11. Operational Definition of Key Terms

Baseline studies (BS): Before starting the project, the organisation conducts extensive due diligence. The study assessed whether or not baseline studies were conducted before the implementation of the program.

County: The term county, in the context of this research, refers to a geographical section in Kenya that performs administrative, judicial, and political operations. The Kenyan constitution recognizes 47 county governments within its borders.

Evaluation: Valuation of a current or accomplished project, including its design, execution, and outcomes, as methodically and objectively as potential (Shapiro, 2004).

M&E scheduling (MES): M&E activities are comprised of the overall project schedule Individuals are specifically assigned to project M&E. Different personnel are assigned to M&E activities such as data collection, analysis and report writing

Monitoring: Information is routinely gathered and analysed to monitor progress toward goals and ensure adherence to standards (Gebremedhin, Getachew & Amha, 2010).

Monitoring and evaluation Practices: a series of tasks carried out on an ongoing basis to report on the status and development of a project.

Planning process: Plans for projects include the planning process for monitoring and evaluation. Clarifying the metrics to be evaluated through an assessment of the knowledge transfer and the amount of detail required by each managerial level.

Project Performance: It is the program's overall quality in terms of influence, benefit to participants, effectiveness, cost-effectiveness, and sustainability project during execution.

M&E Planning: It is the systematic process of defining project objectives, identifying key performance indicators, and establishing effective monitoring and evaluation methodologies to evaluate the performance of water and sanitation projects in this study's context.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This section presents an empirical review and a general literature review. The study reviewed related scholarly work based on the objective. The section also presents the theoretical review, conceptual review, knowledge gap and recap of the literature.

2.2. Empirical Literature

2.2.1. Monitoring and Evaluation and Project Performance

According to the Project Management Competency Theory, project management expertise is essential for tracking and assessing the success of infrastructure projects. According to Gladder (2010), engineering project managers must be able to apply knowledge, skills, tools, and techniques effectively in order to implement plans, attain objectives, and maximise cost, timeframe, and predictable outcomes. Two of the criteria—the PMBOK, which only identifies the knowledge portion of the basic competence, and the Australian National Competency Standards, which emphasises documented performance—have been found to have the greatest influence. Additionally, studies have revealed that some project managers lack the expertise needed to efficiently oversee and assess developments in road infrastructure. In the project management realm, it is imperative to ensure continuous professional development since it enhances competency and ensures success. Options such as training programs, professional certifications, and mentorships provide avenues through which project managers can upskill and polish their competencies to meet industry best practices. Investing in professional

development allows organizations to cultivate a large skill-pool that can drive successful project outcomes in field such as water and sanitation.

There are numerous definitions for project effectiveness. According to Emmett and the GMEP team's definition of M&E from 2017, this process involved methodically gathering and analysing information and procedures in order to assess how well goals and milestones have been met and look for any deviations. M&E is one of the best tools for influencing the effectiveness and success of initiatives, claim Mapitsa and Khumalo (2018). The goal of M&E, according to Emmett and the GMEP team in 2017, is to increase a project's productivity and effectiveness. M&E is separate from project functions but complements them and is closely related to them (Andam & Kissi, 2021). In the modern-day business environment, the integration of technology has brought about a revolution to project management and subsequently, monitoring and evaluation. There are various advanced project management software, collaboration tools, data analytics platforms, and other products that help streamline monitoring and evaluation processes by improving communications and fostering data-driven decisions. It is imperative for water and sanitation projects to embrace these technologies to enhance their adaptation and problem-solving capacities to boost their chances of success.

For the majority of those associated with a project, project performance is the most crucial factor. Many project stakeholders look to them to perform well in terms of achieving their objectives. If the project's objectives are fully attained, it will be a success. According to Badewi (2016), project performance is correlated with both the project's success and its intended goal. Management of projects, customer impact, business success, and future readiness are just a few ways to gauge the progress of the project. Project performance is

driven by three fundamental objectives: time, cost, and quality. A project's performance always represents an average of how well each project's goals have performed separately.

2.2.2 Monitoring and Evaluation Baseline Survey and Project Performance

A baseline assessment serves as the project's initial starting point and is viewed as an aspect of economic, social, and environmental factors during the typical pre-project period, covering areas of change in circumstances and processes that have already occurred. Making a choice is crucial for all projects (Reeve, 2002). The evaluation has to do with the donor asking the charity for too much data. Baseline surveys are important cross-sectional studies that typically offer quantitative data on the state of a specific circumstance concerning the survey topic of a specific population. Afterwards, the project's execution is chosen. It acts as a yardstick for evaluating a project's success or failure. How to adequately analyse data to reflect the change in people's daily lives is a significant matter.

Baseline research aids in creating performance metrics for project success monitoring. Performance measures are crucial to efficiency monitoring systems, claims Carter (2019). Define the data you gather to track your advancement so you can contrast the outcomes that were attained over time with those that were anticipated. As a result, they are crucial management tools for making determinations about programme strategies and actions that are based on outcomes (Nduati, 2011). All strategic objectives, expressly authorized goals, special goals, and assisted interim results quantifiable metrics recognised in the framework for action must be developed by the operations unit as part of the reengineering process.

When evaluating the outcome of a project and its execution, the baseline survey is essential. A baseline survey is an appropriate survey that is carried out using observational and analytical

techniques (M&E), according to PMI (2017), to characterise the impact of a project. Whenever a call comes in, it cuts up until the point at which projects are launched. According to USAID (2017), benchmarks are also put to use for evaluating monitoring and evaluating information gathered before, during, or after the execution of a strategic plan, project, or interaction. They are necessary for establishing attainable performance indicator objectives and for tracking shifts over time. In order to comprehend data in context, essential trends can be especially useful. Goal-setting and forecasting future performance of data benefit from the knowledge of trends and patterns. By offering a point of reference for future data analysis, baselines and baseline market dynamics can also serve an essential benchmarking function for evaluating impact and efficiency. In their conclusion, Kusek and Rist (2018) make the case that baseline surveys are essential for the efficient M&E of projects. This is because the Baseline Survey can provide precise information about what is taking place in the real world during project implementation. Several elements of the baseline investigation, such as choosing the best methodology for the information mix, have an impact on how well observations are conducted and how the results are analysed; establish the fundamental survey metrics, choose the data source, estimate the volume of data, and set up the data analysis infrastructure.

The effectiveness of the M&E process is affected by the survey conducted, which also affects how well the project is performing overall. Several baseline survey measures influencing the effectiveness of M&E projects and projects are shown in a report by the United Nations World Food Programme (2017). Maintaining the viability of a project's overall M&E process requires factors such as indicators of what to expect from a particular project M&E process (UNESCO, 2018). The baseline surveys for project M&E were highlighted by ASARECA (2018) as having several concerns. This comprises the anticipated outcomes for the entire

process/indicators, fundamental research techniques, work logic paradigms, areas for data gathering, data processing, and reporting style.

References from the baseline must come from officially sanctioned sources. Ssekamatte and Okello (2016) contend that objectives must be understood and selected in defiance of these fundamental principles. You can set objectives aimed at demonstrating the significant differences and closing the gap by categorising basic indicators by age, gender, region, city, and discrepancies in literacy and illiteracy rates. The frequency of failures can serve as proof of this. Ensuring that the project can take responsibility for the intended recipients takes time, effort, and money. The earlier you invest, the greater your overall return in terms of worthwhile and affordable projects and advantageous effects.

Beneficiary personal responsibility is a top priority for the success of the project (Ika & Donnelly, 2017). The association between the project's beneficiaries and the contractor's staff members is a key factor in determining the quality of the project's work and outcomes. This does not imply that the project's output, result, or effect necessarily entails any of those terms; rather, it simply means that common ground enhances the program's execution. As a result of the dearth of measures unconnected to the fundamental data, the organisation has determined that it will be challenging to describe the project's implications. Donors may request more and more data as a result of the report's absence of details if there is insufficient monitoring competence and practical expertise to collect, analyse, and report quality data. The problem has been recognised (SokolOxman, 2015).

2.2.3. The M &E Budget and project performance

The successful performance of M&E is also thought to depend on an adequate government budget. The IFRC (2011) asserts that sufficient funding is crucial for an M&E exercise. According to the IFRC (20 11), 3 to 10% of a program's budget should be set aside for M&E. Generally speaking, the budgetary allocation must not be so small as to jeopardise the accuracy of the results, but it also must not redirect project's budget to the extent where it impairs implementation. According to all of the previous studies, a sufficient budget allocated is necessary for an M&E exercise to be successful. According to Mwangi et al. (2014), the budget allocated was a key factor in the success of the project. A quarter of the increase in efficiency of the M&E programmes for CDP initiatives in the constituency was accounted for by a rise in one unit of the government budget for M&E.

The project budget was found by Mugo and Oleche (2015) to be one of the most important factors affecting the project's achievement. Their analysis of the Probit Model's M&E effects on projects revealed that resources allocated had a substantial influence on the project since it had a high marginal impact of 0.13 12997 at a Z statistic of 5.44 and a large robust coefficient of 0.656939 at a Z statistic of 4.92. A budget for monitoring and evaluating activities, according to Mugo and Oleche (2015), was found to be a positively major factor in M&E execution in initiatives. The inference is that, if other factors remained constant, increasing the budget allotted to M&E in a project is strongly likely to significantly raise the likelihood of M&E execution by up to 13.13 per cent.

In terms of other resource management, financial accessibility is the most important resource in any functional organisation, according to Magondu (2013). Consequently, funding is

needed to establish a functional M&E department. He added that the number of employees and their skill sets are essential for the successful project execution and long-term viability of the M&E department.

2.2.4 Monitoring and Evaluation planning and project performance

All project implementation processes begin with planning. A study by Etoori et al. (2020) revealed the significance of M&E planning for enhancing the success of government projects. Assessing the expenses, personnel needs, and special resources needed for M&E work is a crucial skill in the planning process. Fundamentally, M&E must discuss the need for M&E expenditure during the early stages of intervention. This will enable M & E to conduct significant M&E efforts because the funds will be specifically allocated for M & E. Abraham (2014) contends that M&E estimates must be made for the intent of organising organisations and uses, but several investigators have attained the planning stage for the project or intervention phase (Nyonje et al 2012).

The M&E planning enables you to monitor performance levels at particular points in time and gain insight into the program's status as it is being implemented. The selection of suitable performance measures and the development of an information-gathering strategy are both stated by Phiri (2015). M&E planning verifies project performance data. To ensure that project efficiency has been enhanced and managed within the context of M & E planning, these initiatives should be planned. Effective planning guarantees that various resources are available for projects, that components are provided accurately, that the workforce receives training for their jobs, that specific goals are set, and that actual deliveries are characterised, among other things (UNEG, 2017). An ineffective strategic plan for effective M&E execution

is to blame for up to 74% of failed M&E observed in various initiatives, according to UNDP (2015). The majority of organisations don't even allocate funds for M&E planning; instead, they use M&E procedures that have been copied and pasted, which will have an adverse effect on the execution activities and result in the failure of the M&E execution process as a whole. According to Thai (2017), M&E through are completed in a project for success. This is backed up by Ling (2018), whose research in Singapore led to the development of successfully monitored and reviewed plans that produced favourable outcomes. Regardless of whether a project is funded by governmental or non-governmental organisations, this is crucial to its success. UNDP (2015) outlined the essential components of a thorough M&E plan. These comprise planning for M&E time or length of time, planning for monetary system and human capital, preparation for anticipated results and appropriate measures, and guidelines that suffer from process and guidelines.

Resource planning and resource distribution are also a part of M&E planning. Internal knowledge can be hampered and M&E system failures can result if fair resource allocation is not made for this component of project management (Njama, 2015). Evaluating the results attained and their influence on the goals, evaluating the success of the project strategy, appropriate use of resources, potential costs, and initiatives, as well as different profit groups' Influence (Njama, 2015). All of these procedures, data gathering, and improved analysis call for adequate cash flow to be properly accounted for, allocated, and used in the project during the M&E of the project's objectives.

2.2.5. Monitoring and Evaluation scheduling and project performance

The aspect of literature research that is most commonly discussed is the temporal aspect of determining project success. According to Pretorius, Steyn, and Jordaan's (2012) research, project management firms with sophisticated time management procedures generate more successful campaigns than those with less sophisticated procedures. The number of days or weeks from the start of the project's field to its everything is the project's absolute time, which is measured in days or weeks. Time is relative, and so is the speed of a project.

Monitoring tells us how a project, regulation, or programme is performing now and over time about its goals and results. It aims to be descriptive. Evaluations offer details on why objectives and outcomes are met or missed. Here, it is particularly noteworthy that traditional M & E capabilities have been improved to focus on outcomes and implications (Abrahams, 2015). Ratings work in conjunction with monitoring because it alerts us when efforts are getting out of hand through indicators like innovation. The truths and developments found in the surveillance system will be revealed with the aid of appropriate evaluation data.

The implementation of project monitoring for planned performance may result in project performance (Hwang & Lim, 2013). Information gathering, research, and disclosure of the information should all be part of monitoring during a particular iteration. Across the program management field of research, there appears to be agreement that monitoring plays a significant role in performance. Additionally (PMI, 2014), highlighting the value of monitoring in ensuring continuous improvement, literature reviews and reviews of earlier studies conclude that great effort has been put into having an efficient system. Nevertheless,

little is done to quantify the effects of keeping tabs on how state-owned businesses are performing on their projects.

The M&E as a process entails the systematic gathering and analysis of data regarding the ongoing project, as well as a comparison to the project's outcomes and implications with a predetermined execution of its intended goals. According to Béné, Frankenberger, and Nelson (2015), it is the integration of two or more dissimilar but related steps. Another way to think of it is as a project-supporting integrated reflection and communication system. The system is composed of four integrated sections: the M&E system's structure, its execution, the participation of project stakeholders, and the dissemination of the M&E results (Kusters, et al., 2018). Theoretically, an ideal M&E system would need to be trustworthy and culturally acceptable, but not too unbiased to lose its significance (Martens & Wilson, 2018). In order to satisfy the requirements of your partners, you must be capable of influencing policy decisions and continue to focus on them over time based on suggestions from lessons learned.

The process of execution can be thought of as a way to map out the steps that each party will take to support the change. This method and practice don't help beneficiaries reach their intended objectives (Beaulieu et al., 2017). Failure to schedule M&E can harm a program's chances of success. The Lake Turkana fishery processing facilities project, which cost US$22 million, started in Kenya in 1979, based on the TISA Report (2013). The plant was finished, operational for a short period, and then shut down. Too much money was needed to maintain a freezer and to obtain clean water in the desert. All that remains is a dry white elephant in North Western Kenya (Beaulieu, et al., 2017).

2.3. Theoretical Framework

The arguments surrounding the M&E concept were examined in the context of two relevant theories, notably program theory and the results-based management (RBM) view theory.

2.3.1 Program theory

According to Patton (2002) Huey Chen, Peter Rossi, Michael Quinn Patton, and Carol Weiss created the program theory. This theory focuses on who is in charge of the change and how it can be implemented. The general logic used in involvement is demonstrated by the reasonable models that are regularly used to demonstrate the programme theory. For several years, the advocates of this theory applied it to how to link programme theories to assessment Weiss. For several years, programme theory served as a useful tool for M& E; the theory was renowned for its convincing approach to solving issues and takes into account the requirement to include our assessments to back up the findings. Additionally, it offers tools for influencing evaluation's impactful areas (Sethi & Philippines, 2012). The transactions of many organisations involve human service programmes that are created to meet societal needs; these dynamic programmes are open to change in response to predetermined circumstances. Thus, the logic model technique is used in the programme theory. The logic model is expanded upon in the programme theory. To connect to the logical model, it was presented through a graphical scale. The logical model supports the participation of involved parties, top executives, and outcome reviews (Hosley, 2009).

The theory is realistic and serves as a working case of a hypothetical programme (Bickman, 2007). It is a suggestion regarding the conversion of input into output, according to Lipsey (2011). Measuring the transformation by contrasting the expected and actual results. It serves

as an example of how the process and programme elements should affect the results. According to Rossi (2012), a programme theory should include an organisational plan for how to allocate resources and set up the program's activities in order to ensure that the intended service system is established and kept up to date.

The theory also supports plans for the use of resources and analyses how the target population receives the necessary intervention. This is made possible by how the service delivery systems are connected. Last but not least, programme theory offers insightful information about how the scheduled actions for a given target population comprise the anticipated social benefits. The benefits of using a theory-based framework for M & E are demonstrated by Uitto (2010). It entails the capacity to link project results to particular initiatives or activities and the ability to distinguish between desired and unwelcome program effectiveness. Theory-based evaluations allow the evaluator to comprehend how and why the programme functions (Rossi, 2012).

The theory is used in the input-output model to track project progress, share results, and enhance project performance. When properly applied, the M&E practises are the fundamental inputs that sequence the inputs to eventually create a quantifiable outcome. Program theory describes how changing the input and procedures can improve output and produce positive outcomes. The factors that affect the framework's output, or achievement, are discussed as contributions; in this case, the variables are the preparation procedure, practical know-how, stakeholder engagement, and administration responsibility. The program's goals are made clearer by the logical model, which also identifies the anticipated causal links in the chain of results, including inputs, processes, outputs, and overall results. It establishes a connection to the definition of performance indicators for each phase of the logical model. By tracking the

progress and implementing corrective measures whenever a detour occurs to guarantee the goals are realised, it addresses the concerns about unpredictability within the project. Program theories help determine if there has been a transformation in the direction of the desired level of achievement by demonstrating a single immediate result that the programme has accomplished. Complex programmes, which are typically found in complex operations, display several quick results.

2.3.2 Results-Based Management Theory

The Results-based management (RBM) theory emerged in the Government of Australia in the middle of the 1980s and gained popularity in the 1990s under the leadership of the Organization for Economic Co-operation and Advancement (OECD). In management, RBM is one of the tactics. All those working on the ground, whether directly or indirectly, to accomplish the desired program outcomes make sure that their operations, goods, and services, as well as their final output, all work toward achieving sustainable outcomes (Crawford and Bryce, 2013). Responsibilities are clearly defined in RBM. While defining the ultimate outcomes, it also calls for monitoring and self-evaluation of the steps taken to achieve sustainable outcomes, such as performance tracking (UNDP, 2012). RBM is a continuous technique, whose main features all focus on M & E components. It begins with the fundamental concepts of the planning process, which includes establishing the vision and mission and establishing the conceptual model techniques based on the outcomes. Execution begins once it is decided to run a series of outcomes through an initiative, and monitoring is now a crucial exercise to help achieve successful outcomes. RBM is a continuous process that necessitates regular shall be utilized to evaluate in order to support lesson learning and continuous improvements (UNDP, 2012). Regular adjustments to the main plans are made

based on the lessons discovered during M&E. Plans that were heretofore used are altered, and new ones are created following the most recent lessons. RBM emphasises monitoring as a continuous process, with lessons learned from the process being occasionally explained. They guide the decisions and actions taken during the improvement phase. Evaluations are carried out to support ongoing project advancements. The application of changes made for both current and upcoming development and planning.

Hwang and Lim's (2013) RBM model illustration placed a strong emphasis on monitoring as a crucial task throughout the process of the project implementation cycle. They defined monitoring as a continuous process of organised taxation that relies on partners' engagement, reproduction, critiques, data clustering, analysis of specific performance, and periodic reports. Making sure that data collection systems are established and conducted regularly is a crucial component of effective monitoring. Baseline information is typically gathered at the start of a project to illustrate where this achievement is at any given time (Valadez and Bamberger, 2012). Evaluation is the role of a separate and situational factor, whereas monitoring is mainly a managerial activity that is centre to the running of a programme or project. For RBM to be taken seriously, the reported results must have external validation. It concentrates on the intended and attained outcomes, investigating the causality chains of procedures, outcomes, and situational factors to understand achievements. Robert (2010) asserts that an evaluation could perhaps publish facts supported by documentation that has been demonstrated to be dependable, credible, and beneficial. It should also make it possible for findings, suggestions, and lessons to be quickly incorporated into the decision-making procedures.

The relevant parties should participate in the evaluation practice in a range of practises to increase the value of the findings and suggestions (Clarke, 2011). Evaluations serve significant

roles, but their use, accountability, and effectiveness are not constrained by them. The consumption rate is a crucial indicator to give decision-makers evidence about project effectiveness and current best practices. Responsibility is to the program's sponsors, funding agencies, government representatives, stakeholders, and members of the general public, and the ability to contribute is to the formulation of official policies, the achievement matrix, and organisational effectiveness (UNDP, 2012).

From a comprehensive perspective, the theory aids in the creation of techniques for measuring performance that affect project performance. Through substantiated lessons learned and outcomes, evaluations are used to enhance performance. According to the theory, reporting to the stakeholders and carrying administration responsibility for project outcomes were given more weight. The theory's main goal is to create lasting change throughout a methodical planning process that makes use of skilled labour to affect project outcomes.

RBM offers components for tracking the success of a project, which are related to the different factors in the present study. Strategic planning, technical know-how, stakeholder engagement, and managerial engagement are important components that are strongly attributable to the RBM theory. This combination produces long-lasting change.

2.4. Conceptual Framework

An investigator's perspective on the issue serves as the conceptual framework for the study (Kaplan 2002). A conceptual framework is a model that has been proposed to categorise the constructs used in a study and their relationships. According to Mugenda and Mugenda (2003), a conceptual model serves as an audience's quick guide to the expected relationship between the predictor and predicted variables.

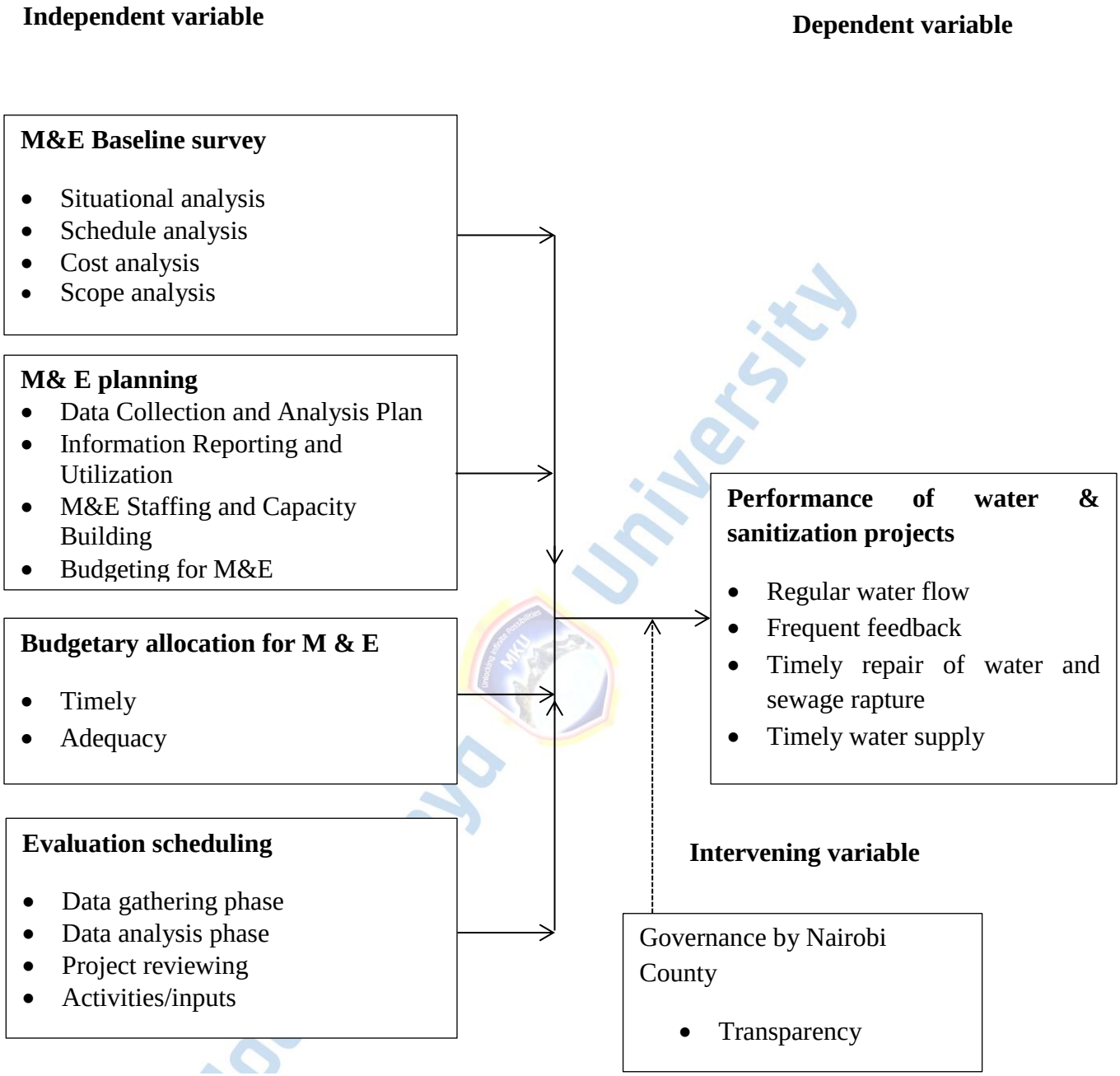

Figure 2. 1: Conceptual framework

2.5. Knowledge gap to be researched

Despite the increased importance of M & E practice on the performance of the projects, little effort has been taken into consideration in the application of the M & E practices in water and sanitation projects in developing countries Kenya included. Studies existing on the subject

have not considered the M & E practices application in the water and sanitation sector. For instance, a study by Pretorius, Steyn, and Jordaan (2012). Analysed engineering projects while Béné, Frankenberger and Nelson (2015) considered the conceptual and empirical considerations. A study by Steyn and Jordaan focused on projects in construction and engineering projects. Béné, Frankenberger and Nelson adopted an explorative approach and no attempt was made to assess the effect of Design, monitoring and evaluation of resilience interventions on project performance. Also, the study had limited empirical analysis.

2.6. Recap of the Literature Review

Baseline studies are useful cross-sectional studies that typically offer quantification data on the state of a specific situation at a specific time. According to USAID (2017), benchmarks are also put to use for evaluating M&E information gathered before, during, or after the execution of a strategy, project, or activity. In order to quantify the effects of a project, a baseline survey is, following PMI (2017), a reasonable survey that is carried out using M&E techniques. In the overall M&E process for a project, baseline surveys are a crucial component. The baseline surveys for project M&E were emphasised by ASARECA (2018) as having several considerations. The expected outcomes of the overall process and its measures, as well as fundamental research techniques, frameworks for organising work, data analysis, and reporting styles, are all included. The frequency of breakdowns can serve as proof of this. Setting objectives that aim to emphasize the significant differences and closing the gap can be aided by categorising basic indicators by age, gender, region, city, and discrepancies in literacy rates. The lack of indicators completely irrelevant to the fundamental data has led the organisation to conclude that it was challenging to describe the program's implications.

In order to achieve better project performance in government agencies, M&E planning is crucial. Planning for M&E involves estimating the costs, personnel, and specialised resources needed. Planning these actions enables project achievement to be enhanced. The choice of suitable performance measures and the development of an intelligence-gathering strategy are both stated by Phiri (2015). According to UNDP (2015), inadequate planning is to blame for up to 74% of failures in M&E seen in various projects. The critical characteristics of a well-defined plan, according to UNDP, are time or duration planning, financial and human resource-making plans, training for anticipated results, and appropriate actions. This is crucial in figuring out whether different projects, whether funded by governmental or non-governmental organisations, will be successful. According to Thai (2017), M&E across are completed in a project for accomplishment. Ling (2018), investigated Singapore and came to the conclusion that well-managed and well-evaluated plans produce favourable outcomes.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

This chapter describes the methodologies to be used in the survey. In particular, survey design, target population, sample size and sampling method, data collection tools, validity and reliability of survey tools, data collection procedures, data analysis, ethical considerations, and finally operational definitions of variables.

3.1. Research methodology

The research utilized a mixed method design using quantitative data and qualitative data from interviews with Key informants and focus group discussions with community members. Both the Quantitative approach and qualitative approach were used to assess monitoring and evaluation practices and performance of water and sanitation projects in Langata sub-county, Nairobi County, Kenya. The use of a mixed method design underscores the inherent complexities involved when evaluating the performance of water and sanitation projects. This approach makes it possible to triangulate data from different sources, which in turn enhances the study's outcomes' validity and reliability. The study captures a holistic perspective of how M&E practices influences project performance by adopting both quantitative and qualitative techniques.

The quantitative aspect of this methodology involves the administration of structured questionnaires to water and sanitation projects in Langata Sub County. These questionnaires are designed to gather important data on various M&E practices such as baseline studies, M&E planning, scheduling, and other project performance indicators. The data collected will be

analysed statistically to establish relationships between these M&E practices and project performance in the context of water and sanitation initiatives in Langata Sub County.

This research methodology also incorporates qualitative methods to gain deeper insights into the different factors influencing M&E practices and water and sanitation project performance. Interviews are conducted to gain first-hand information from key informants including representatives from different water and sanitation projects in Langata Sub County and officials from the Nairobi County Ministry of Water and Environment, National Environmental Management Authority (NEMA), United Nations Environment Programme (UNEP), and Athi River Water Services Board. These interviews will provide valuable qualitative data from different perspectives offered by the stakeholders of water and sanitation projects in Langata Sub County. Focus group discussions will also be conducted with the community members to understand the perception of water and sanitation services in Langata Sub County and how M&E practices have affected project performance outcomes. Interview and focus group data will be analysed thematically to identify underlying patterns and themes that highlight the link between M&E practices and water and sanitation project performance.

3.2. Research Design

An explanatory survey design was used for this survey. It enables the study to examine how the predictor and predicted variables relate to one another. Research design, according to MacMillan and Schumacher (2001), is responsible for deciding on the study's components, location, and the measures used to collect the data needed to answer the study's queries. This study aims to clarify the mechanisms underlying the relationship and potential relationships between predicted and predictor variables (Williamson, 2002). The ability to determine the

attribute to assess and the appropriate methodology for the evaluation is another benefit of explanatory research. This study uses an explanatory study design as it aims to illustrate the practice of monitoring and assessment as well as the performance of the water and sanitisation projects by the Nairobi county government. Particularly, the study used an explanatory study design to explain how M&E practices (baseline studies collection, M&E planning, M&E budgetary allocation and M&E scheduling) influence the performance of the water and sanitisation projects by the Nairobi County government.

In addition to the explanatory survey design, this study uses a mixed methods approach is used to comprehensively capture the complexities of how monitoring and evaluation practices influence the performance of water and sanitation projects. This method facilitates the triangulation of data from multiple sources, such as quantitative surveys, qualitative interviews, and others to come up with harmonized results that answer the research questions of this study. This approach also helps this study overcome the limitations of single-method approaches which tend to limit the its perspective on the factors influencing project performance and how they are influenced by M&E. This form of methodological pluralism improves this study's credibility and reliability by providing a holistic overview of the dynamic interplay between factors affecting the performance of water and sanitation projects.

3.3. Location of the Study

The investigation was carried out in the county of Nairobi. The Nairobi County, which immediately succeeded Nairobi's operational City Council, is the outcome of Kenya's 2010 Constitution. The Devolution Governments Act (DGA), the Municipalities and Urban Areas

Act and numerous other Acts set the rules for how Nairobi County functions. The county government of Nairobi envisions itself as "the city of choice to invest in, work in, and live in."

Nairobi County (NC) is responsible for offering a variety of services to those living inside its borders. These comprise all of the current services offered by the now-defunct City Council as well as additional services received from the national govt as well as the provision of water and sanitation to the office dwellers (www.nairobi.go.ke/home/history).

3.4. Target Population

A population is a group of people, events, or things, that share measurable features(Acharyya & Bhattacharya, 2019). According to Lawes et al. (2021), a population is a collection of occurrences in which an investigator is interested and wishes to extrapolate. The target population for this study was 245 officials managing several water and sanitation projects by the county government of Nairobi (County Government, 2022). The unit of observation was the completed projects, while the unit of analysis was water and sanitation project management employees. The unit analysis for this study is the water and sanitisation projects. The respondents for the study were project officers. Also, secondary data was collected from the Nairobi County ministry of water and environment reports and periodically to supplement the primary data.

This study will focus on over 30 water and sanitation projects within Langata Sub County. The sample of 245 officials are selected from these projects from different hierarchies. Each project will contribute a proportionate number of respondents based on its scale and its hierarchy on Langata sub county's water and sanitation infrastructure. Stratifying the target population in this manner (project size and management positions) helps create a sample that

fully captures the diverse perspectives and experiences of how M&E affects water and sanitation project outcomes.

3.5. Sampling Procedures and Techniques

To choose the sample that participated in the study, the researcher employed a probability-sampling technique. Probability sampling is a sampling procedure that ensures that every member of the population has an equal chance of being selected (Quatember, 2019). The investigator must ensure that everyone in the company has an equal chance of being chosen using a randomization approach. First, a list of officials working in the water and sanitation industry in Langata Sub County was obtained. This was followed by using a random number generator to obtain 103 random numbers. Officers corresponding to these numbers were then selected from the list to participate in the study. Through this approach, this study ensures that each officer had an equal opportunity of being chosen to participate.

3.6. Sample Size

Sampling is the process of selecting a subset of a population to serve as a representation of that population(Andrade, 2020). The most important condition for any sample is that it be as inclusive as representative of the population from that it was taken. A sample is a representation of the findings of the analyses performed using the investigator sampling units that are comparable to those found in the investigator analysed of the complete population. The researcher used Slovin's formula to estimate the sample size (Slovin, 1960).

$$n = N / (1+Ne^2).$$

Whereas:

n = no. of samples N = total population

e = error margin/margin of error which is approximated at α=0.075

$n = 245 / [1+245 (0.075^2)]$

n = 245 / [1+245 (0.005625)]

n = 245 / [1+2.34]

n = 245/2.378125

n = 103.022339~103

3.7. Data Collection Procedures

The data collection procedures used in this study are outlined below:

- Participant recruitment: The first step of the data collection process will involve compiling a list of all officials working within water and sanitation projects in Langata Sub County. Respondents will then be selected from this list using the randomized number method.
- Informed consent: Data collection will only begin after all respondents have provided informed consent to have their information stored. Each respondent will be required to sign a written consent form which describes their participant rights, voluntary involvement, and data confidentiality procedures.
- Data collection instruments: The data will be collected using surveys and interviews that capture relevant information related to how M&E practices affect the performance of water and sanitation projects in Langata Sub County.
- Data collection process: The survey will be administered to the respondents by the researcher in a manner that encourages open and honest responses. Sufficient time will be provided to ensure the collection instruments are properly utilized.
- Quality control: Effective quality control measures will be implemented throughout the data collection process to maintain data integrity and accuracy.
- Ethical considerations: This study will follow strong ethical guidelines throughout the data collection process to ensure the participants' confidentiality and rights are

protected. This includes implementation of measures such as informed consents, voluntary participation, and risk minimization.

- Data management: The collected data will be carefully stored to ensure optimal data security and integrity. It will then be subjected to quantitative and qualitative analysis to reveal findings related to the effect of M&E practices on the performance of water and sanitation projects Langata Sub County.

3.8. Data Collection Instruments

This study used a questionnaire and interview schedule.

3.8.1. Survey questionnaire

The use of questionnaires in this study is significant in attaining data from the project officials managing water and sanitisation projects; these officials are ideally busy and therefore can answer them at their convenience. Orodho (2009) explain that questionnaires as effective since they can accumulate a large number of details within a limited period and they can be analysed easily. Due to the size and schedule of the targeted respondents, the use of a structured questionnaire was appropriate. The questionnaire contained five sections; the first section assessed basic respondent information, and the second section gathered information on baseline studies collection. The third section gathered facts on the M&E planning; the fourth section gathered facts on the M&E schedule, the fifth section gathered facts on the M&E budget and the sixth section gathered on the performance of water and sanitation projects under the county government of Nairobi. The questionnaire was used to target project officials.

3.8.2. Key informant interview

Also used in the survey were key informant interviews. Interviews are in-person interactions where the interviewers interact with informants to elicit information relevant to the study's

problem (Kerlinger & Lee, 2000). The interview guide was created for representatives of the water ministry. They are crucial to the researcher's ability to assess participants' levels of experience and comprehend their diverse points of view. The researchers created an interview guide that included the exact subjects they wished to cover during the interview as well as a framework of themes to be examined. The interview schedule contained fundamental questions structured around monitoring and evaluation practices and the influence on the performance of water and sanitation projects by the Nairobi County government. Interviews were used to target key government officials for an organisation affiliated with water and sanitation services in the County government of Nairobi; NEMA, UNEP, Athii River water board, the National government and the environment department for the county government.

3.9. Pilot testing of the research instruments

Prior to conducting the actual survey, a pilot survey was carried out to test the instruments and survey protocols. This was done to check the validity and dependability of the survey. According to Glasgow (2005), pre-testing the questionnaire or structured interviews can help reduce issues before the data collection process starts. It is recommended that a sample of individuals who are equivalent to those who made up the survey sample be used for the pilot test. 10 % of participants typically took part in the pre-test (Glasgow, 2005)

A pilot survey aids in improving the internal validity of the research instrument by identifying questionnaire issues that could result in skewed responses or participants who are unable to understand the questions. Planning for the actual study is also aided by the pilot survey. Additionally, it can indicate potential failure points for the primary study, risks associated with ignoring research protocols, and the suitability of suggested methods. Additionally, it

demonstrates what is effective and ineffective, such as ambiguous guidelines and questions (Nachmias & Nachmias, 1996). The material's ability to help an analyst create coding frameworks for open-ended questions is also established through the pilot study (Orodho, 2009). The pilot study was conducted targeting water and sanitation projects from the county government of Kiambu to assess the ability of the questionnaire to collect consistent data.

3.10. Validity and Reliability of Research Instrument

3.10.1 Validity of the research instruments

Construct validity and content validity were used in this study. Construct validity is defined by Saunders et al. (2007) as the degree to which assessment queries accurately reflect the occurrence of the components being measured. The questionnaire had several components in this research and for construct validity purposes to make sure that each section evaluates data for a particular goal and that the knowledge is consistent with the conceptual framework of the study.

The degree to which a measuring tool adequately covers the survey's exploratory goals is referred to as its content validity. Thus, it was crucial to verify the study tools prior to distributing them to the sample population in order to ensure that they collected the desired information. The tool was adjusted as needed based on feedback from the supervisors, colleagues, and other investigators and scholars. For example, ambiguous items, spelling errors, and other grammatical errors that may have occurred during the study tool's development were removed.

3.10.2 Reliability of the research instruments

Running frequencies and proofreading to eliminate errors should be used to determine whether the questionnaire's components are reliable. The amount of time required to administer the survey questions to the sample was also determined by pre-testing. Within a two-week interval, the researcher administered survey questions to the same group twice. To evaluate the validity of the questionnaire, the study used Cronbach's alpha coefficient. A common

technique for testing consistency is Cronbach's coefficient. Between 0 and 1 is the range of Cronbach's alpha reliability coefficient. A coefficient of 0.70 or higher denotes the survey tool's consistency, according to Gliem and Gliem (2003). This was utilised in this research. SPSS was used to calculate this reliability test

3.11. Data Analysis procedures

Raw data was organised and cleaned after data collection. In order to enhance the quality of the reactions, data pre-processing comprised the assessment of any incorrect or incomplete reactions and correcting them. Statistical Package for Social Sciences was then used to codify and summarise the responses (SPSS).

The information gathered from open-ended queries was coded, reached, and transferred to SPSS for analysis. Before any modifications are made to the dataset used for analysis, the original data is held in reserve. The field data was analysed using both quantitative and qualitative approaches. Continuous data was summarised using descriptive and inferential statistics including mean, SD, median, quartiles, minimum and maximum, and percentages employed to summarise different variables.

The information was summarized using descriptive and inferential statistics in the following phase. Frequency and percentage tables were used to produce the analyses' findings. Although they enable the understandable distribution of scores using statistical measures of central tendencies, dispersion, and distribution, descriptive statistics were used (Orodho, 2004).

Regression Model

According to Heeringa, West, and Berglund's (2017) description of data analysis, it entails the methodical application of statistical techniques to the description of the gathered field data. Descriptive statistical analysis was utilized to describe the data, and inferential analysis was used to show how the survey's factors relate to each other. Means and variance and standard deviation are examples of descriptive analysis, whereas inferential analysis like the Pearson correlation coefficient and straightforward regression analysis were used in this research. Regression analysis was used in this research (Kutner, Nachtsheim & Neter 2004). The statistical model looks like this:

$$\mathbf{Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta 4_3 X_3 + \beta_4 X_4 + \varepsilon}$$

Whereby Y = Performance of water and sanitation project

$\mathbf{X_1}$= baseline survey, $\mathbf{X_2}$= M&E planning, $\mathbf{X_3}$= M&E budget allocation, $\mathbf{X_4}$= M & E scheduling,

β_1, β_2, β_3, β_4 = Coefficients of Determination

$\boldsymbol{\varepsilon}$ = Error Term.

3.12. Ethical Considerations

The researcher and the respondent must agree before starting the process of collecting data that spells out their rights and obligations through informed consent (Kerlinger & Lee, 2000). Consequently, throughout this research, all ethical standards appropriate to its essence were upheld. The second level of ethics dealt with the participants as stakeholders who must be

aware of and protected from violating their fundamental rights throughout the qualitative research. In order to comply with the ethical necessity, Mount Kenya University's Ethical Research Board approval and a National Council of Science, Technology, and Innovation permit were required in order to conduct this research. All parties involved were also informed of the study's intended conduct. Additionally, it was necessary to describe the study's purpose to each participant. The researcher informed participants of any advantages and disadvantages or results of their involvement in the research (Nachmias & Nachmias, 1996). The researcher verified that people involved in the study gave informed consent before proceeding with the study and did not in any way coerce respondents into providing information.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSION

4.1. Introduction

This chapter presents the analysis of data collected from the field. Both descriptive and inferential statistics are used in the analysis and presentation of the findings. The chapter begins with a response rate followed by demographic information of the respondents, a description of each variable and inferential statistics from the combination of independent and dependent variables. The study findings are presented as per the objectives of the study using charts and tables.

4.1.1. Response Rate

The sample size of this study was 103 participants. Out of the 103 questionnaires that were distributed, 78 questionnaires were returned and considered to have sufficient data, which gives a response rate of 76%. According to Kothari (2012), a response rate of 50% or more is adequate for analysis therefore the responses obtained were an acceptable basis for making a conclusion; this is shown in Figure 4.1 below

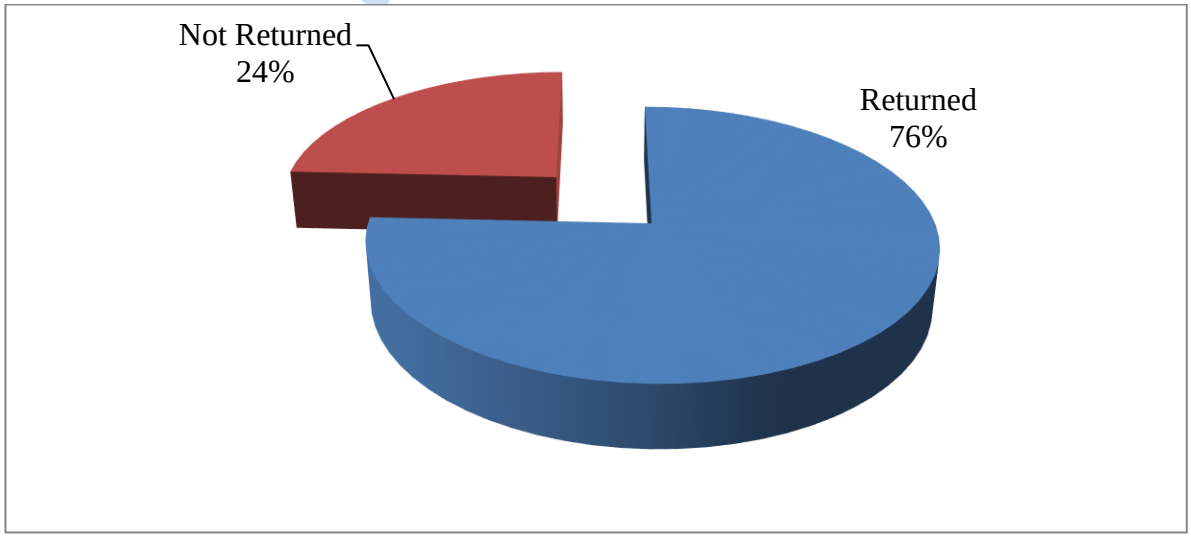

Figure 4. 1: Response Rate

4.1.2. Reliability test

The study used Cronbach's alpha in examining the reliability of the questionnaire and valued it at an alpha value > 0.700. The findings indicated that all variables obtained an alpha value > 0.700, indicating high internal consistency. The Cronbach's alpha values obtained for respective variables were found to be consistent, therefore concluding that the tool was reliable in assessing the monitoring and evaluation practices and performance of water and sanitation projects in Langata Sub County, Nairobi County, Kenya.

Table 4. 1: Reliability of Study Variables

	Items	Number of items	Cronbach's alpha
1	M & E baseline studies		0.812
2	M & E planning		0.735
3	M & E Structural Framework		0.773
4	M & E Scheduling Practice		0.863
5	Performance of Water and Sanitation Projects		0.751
6	The questionnaire		0.813

4.2. Descriptive statistics

4.2.1. Demographic information

The study relied on primary data, which was collected from the staff of Nairobi Water Company, Langata Sub County using a questionnaire. The demographic information included gender, age, education, and the duration worked prior to the study period. These elements offer crucial perspectives for comprehending the complexities of the water industry within the parameters of the study. Analyzing gender dynamics makes sure that any discrepancies and

gender-related effects on experiences and roles are thoroughly analyzed. Age offers a detailed understanding of generational viewpoints and delivers useful insights into workforce demographics. One of the most important factors that shape people's capacities and knowledge bases and, in turn, affects their contributions to the water sector is their educational attainment. It is also important to evaluate the length of time spent working in the water sector to determine the level of experience and skill since this has significant consequences for institutional knowledge and talent development. In every given study, these factors work together to provide a thorough and inclusive analysis that supports targeted interventions and well-informed decision-making for long-term progress.

Table 4. 2: Participants' Demographic information

		n	%
Gender	Male	55	70.5
	Female	23	29.5
	Total	78	100.0
Age	Below 25 years	10	12.8
	26-35 years	22	28.2
	36-45 years	31	39.7
	46-55 years	12	15.4
	Above 55 years	3	3.8
	Total	78	100.0
Level of education	Certificate	18	23.1
	Diploma	36	46.2
	Degree	20	25.6
	Masters	4	5.1
	Total	78	100.0
Duration worked in the water sector	Less than 2 years	6	7.7
	2 to 5 years	53	67.9

	6 to 9 years	18	23.1
	10 years and above	1	1.3
	Total	78	100.0

The majority of the respondents were male who accounted for 70.5% of all responses while the female accounted for 29.5% of the responses. This level of predominance by males highlights the existence of a major gender imbalance within the water and sanitation industry in Langata Sub County. This finding, however, is consistent with the wider context of the trend that is often observed in male-dominated technical industries. This means there is a need for better gender-sensitive policies and interventions to create a diverse and inclusive environment in the water and sanitation sector in the region.

Most of the respondents were aged between 36 and 45 years (39.7%) at the time of this study, the second largest proportion were participants aged between 26 and 35 years who accounted for 28.2% while those aged 46-55 accounted for 15.4%. This underscores the diverse range of perspectives and experiences among the members of the workforce of the water and sanitation industry in Langata Sub County. The fact that the younger cohort accounted for 28.5% suggests that there is a perfect blend between experience and young talent, each of which contribute unique skills and fit into the strategic objectives for future development in the sector.

Most participants reported that they had attained a diploma (46.2%) at the time of the study, 25.6% had attained a degree certificate, 23.1% had attained a certificate level of qualification and 5.1% reported having attained a master's level. These varying education levels among the participants highlights the significant of continuous skill development in the water sector.

These figures indicate a spectrum of qualifications that serve to enrich the water and sanitation knowledge base and potential foster innovation and development in future.

Most participants who accounted for 67.9% reported that they had worked for 2 to 5 years in the organization. At least 23.1% had worked for 6-10 years while 7.7% and 1.3% had worked for less than 2 years and over 10 years respectively. These figures reflect the level of experience and sector knowledge among the staff members. A young workforce signifies the sector's potential for growth while longer tenured individuals provide the experience needed to advance the sector. This blend of tenure also underscores the sector's need for good succession planning and talent management to optimize continuity and development.

4.2.2 Key Informant Data and Triangulation with Quantitative Findings

In addition to the quantitative data from the questionnaire, this study also gathered qualitative insights from key informants through an interview process. This exercise was conducted to provide contextual information and personal perspectives into the impact of M&E practices on the performance of water and sanitation projects. The findings from these interviews highlighted the main challenges facing the Nairobi Water Company, such as infrastructural limitations, compliance and regulations, and issues with workforce management. The key informants, who are experts in the field, also shed light on emerging trends in the industry such as the adoption of sustainable water management practices, the incorporation of technology, and improvements in customer engagement. Triangulation was achieved through the comparison and contract between the results of the quantitative survey and qualitative insights from key informants. The quantitative data highlighted statistical trends matching the qualitative data, but the latter provided a deeper context into the factors driving these trends. By triangulating qualitative and quantitative findings, this study

provides a comprehensive analysis of the landscape of the water and sanitation industry in Langata Sub County and how M&E practices influences its performance.

4.3. M & E Baseline Studies and the Performance of Water and Sanitation Projects

The table presents participants' opinions on various facets of baseline data collection in the context of M&E in project implementation. It delves into crucial aspects such as the rolling establishment of baselines before project initiation, the prompt collection of baseline data, the emphasis on quality data for comprehensive information, and the clear definition of responsibilities for data collection, analysis, and dissemination. The insights also underscore the significance of timely resource availability to facilitate seamless baseline data collection. Notably, the opinions highlight a collaborative approach with stakeholders, ensuring their input in determining appropriate output and outcome indicators for measurement.

Table 4.3: Rating of M & E Baseline Studies Practice in Implementation of Water and Sanitation Projects in Langata Sub County

	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Baseline data was collected before the project commencement	4(5.1)	2(2.6)	46(59.0)	25(32.1)	1(1.3)	78(100)
Baselines are established on a rolling basis	3(3.8)	3(3.8)	27(34.6)	39(50.0)	6(7.7)	78(100)
The baseline data required for the project is collected promptly before project implementation	4(5.2)	1(1.3)	40(51.9)	29(37.7)	3(3.9)	77(100)
Quality data is collected to provide all the required information	3(3.8)	4(5.1)	40(51.3)	29(37.2)	2(2.6)	78(100)
There is always a clear definition of who is responsible for the collection, analysis and dissemination of the baseline data	3(3.9)	2(2.6)	33(42.9)	36(46.8)	3(3.9)	77(100)
The resources are always available in time to collect the baseline data before a project implementation begins	3(3.9)	3(3.9)	35(45.5)	33(42.9)	3(3.9)	77(100)
Stakeholders are always consulted on the appropriate output and outcome indicators to measure and other information to include.	3(4.0)	4(5.3)	28(37.3)	37(49.3)	3(4.0)	75(100)

The majority of participants, constituting 59.0%, expressed a neutral position on the statement that baseline data was collected before the commencement of the project. Additionally, 32.1%

agreed, and 5.1% strongly disagreed with this assertion. Concerning the establishment of baselines on a rolling basis, half of the participants, or 50.0%, agreed with this practice, while 34.6% maintained a neutral position. Disagreement was less prevalent, with 3.8% strongly disagreeing and 3.8% disagreeing with the claim. The percentage of those who strongly agreed represents 7.7% of all participants. The prompt collection of baseline data before project implementation garnered mixed responses, with 51.9% expressing neutrality, 37.7% agreement, and 5.2% strong disagreement.

Responding to the issue of collecting quality data to provide all the required information, a significant portion, 51.3%, maintained a neutral position. A total of 37.2% agreed, while 5.1% disagreed, and 2.6% strongly disagreed. The allocation of responsibilities for collecting, analyzing, and disseminating baseline data exhibited a balance, with 46.8% agreeing, 42.9% maintaining a neutral position, and 3.9% strongly disagreeing. Regarding the availability of resources promptly for baseline data collection before project initiation, 45.5% were neutral, 42.9% agreed, and 3.9% both disagreed and strongly disagreed. On the stakeholder consultation on appropriate indicators and information inclusion, most participants, 49.3%, agreed that stakeholders were always consulted on the appropriate output and outcome indicators to measure and other information to incorporate into the projects while 37.3% maintained a neutral position.

Table 4.4 presents an analysis examining the relationship between M&E baseline studies and the perceived performance of water and sanitation projects.

Table 4.4: Relationship between M & E Baseline Studies and Perceived Performance of Water and Sanitation Projects

Correlations

		perceived performance	Baseline studies
Perceived performance	Pearson Correlation	1	.910**
	Sig. (2-tailed)		.000
	N	78	78
Baseline studies	Pearson Correlation	.910**	1
	Sig. (2-tailed)	.000	
	N	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

The study investigated the correlation between perceived project performance and M&E baseline studies. The Pearson Correlation coefficient between perceived performance and baseline studies was found to be highly significant at the 0.01 level (2-tailed), with a coefficient value of .910. This strong positive correlation indicates a robust relationship between the two variables.

4.4. M & E Planning Practice and Perceived Performance of Water and Sanitation Projects

The table gives a thorough summary of respondents' perspectives on many aspects of strategies for monitoring activities inside organizations. The survey gathers information about the following topics: the suitability of monitoring plans for use in organizational functions; the level of employee training regarding effective monitoring planning techniques; the use of network diagrams and frameworks for project scheduling; the inclusion of stakeholder analysis surveys in resource planning; the fit between stakeholders' roles and their qualifications and experience; the use of project management software for monitoring plans; and the application of rapid assessments in project monitoring. This comprehensive analysis

provides insightful information about the attitudes and procedures related to monitoring plans in the examined organizational setting.

Table 4.5: Rating of M & E Planning Practice in Implementation of Water and Sanitation Projects in Langata Sub County

	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Monitoring plans are well applicable in organisational activities	2(2.6)	8(10.4)	9(11.7)	53(68.8)	5(6.5)	77(100)
Employees are well trained on effective monitoring planning practices in organization projects	1(1.3)	4(5.1)	19(24.4)	50(64.1)	4(5.1)	78(100)
Network diagrams and frameworks are used in scheduling organization projects	2(2.6)	3(3.8)	18(23.1)	51(65.4)	4(5.1)	78(100)
The organization conducts stakeholder analysis surveys on its resources before it plans.	1(1.3)	3(4.0)	17(22.7)	51(68.0)	3(4.0)	75(100)
Stakeholders' roles match their experience and qualifications in the organization.	3(3.8)	3(3.8)	13(16.7)	55(70.5)	4(5.1)	78(100)
The organization uses project management software for monitoring plans.	0(0.0)	5(6.5)	18(23.4)	50(64.9)	4(5.2)	77(100)
Rapid assessment is conducted in monitoring plans used in projects	1(1.3)	7(9.0)	19(24.4)	47(60.3)	4(5.1)	78(100)

In the assessment of M&E planning practices for water and sanitation projects, the majority of participants strongly agreed that monitoring plans are well applicable in organizational activities, constituting 68.8% of respondents. Additionally, a significant proportion, 64.1%, agreed strongly that employees are well-trained in effective monitoring planning practices in

organizational projects. Furthermore, a substantial percentage, 65.4%, expressed strong agreement that network diagrams and frameworks are actively employed in scheduling organizational projects. The majority of participants, 68.0%, also agreed strongly that the organization conducts stakeholder analysis surveys on its resources before planning. Stakeholders' roles matching their experience and qualifications in the organization garnered a strong agreement from 70.5% of respondents. Additionally, 64.9% of participants strongly agreed that the organization utilizes project management software for monitoring plans, highlighting a technologically oriented approach to project management. Lastly, in the context of rapid assessment in monitoring plans for projects, 60.3% of participants provided a strong agreement. Overall, the responses indicate a positive perception and widespread acceptance of effective M&E planning practices in the implementation of water and sanitation projects in Langata Sub County.

Table 4.6, examines the relationship between Monitoring and Evaluation (M&E) planning and the perceived performance of water and sanitation projects.

Table 4.6: Relationship between M & E Planning and Perceived Performance of Water and Sanitation Projects

Correlations

		Perceived performance	Planning
perceived performance	Pearson Correlation	1	.903**
	Sig. (2-tailed)		.000
	N	78	78
Planning	Pearson Correlation	.903**	1
	Sig. (2-tailed)	.000	
	N	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

The table indicates that the Pearson Correlation between perceived performance and planning is .903, and this correlation is statistically significant at the 0.01 level (2-tailed). The Pearson Correlation coefficient of .903 signifies a very strong positive correlation between perceived performance and planning. The p-value (Sig. or Significance) of .000, which is less than 0.01, further confirms the statistical significance of this correlation. This implies that there is a highly significant relationship between M&E planning and the perceived performance of water and sanitation projects. The strong positive correlation suggests that as one variable (e.g., planning) increases, the other variable (e.g., perceived performance) also tends to increase. This finding indicates that effective M&E planning is associated with a higher perceived performance of water and sanitation projects.

4.5. M & E Structural Framework and Perceived Performance of Water and Sanitation Projects

The table below provides a thorough understanding of respondents' perceptions of the M & E (Monitoring and Evaluation) structural framework and its effect on the effectiveness of water and sanitation projects. The respondents share their opinions on several important topics, such as the capacity developed for M&E implementation during project execution, the ongoing analysis of implementation-related obstacles, the supply of viable solutions to address identified obstacles, and the implementation of plans to show the projects' impact. By illuminating stakeholders' viewpoints and possible areas for development, this data adds to a more nuanced knowledge of the M&E structural framework and its function in improving the overall performance of water and sanitation projects.

Table 4. 7: Rating of adherence to M & E Structural Framework Practice in Implementation of Water and Sanitation Projects in Langata Sub County

	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
The capacity is built to implement M & E when implementation projects	0(0)	4(5.3)	20(26.3)	49(64.5)	3(3.9)	76(100)
There is a constant analysis of the constraints during project implementation	0(0)	3(4.1)	30(40.5)	38(51.4)	3(4.1)	74(100)
Potential solutions are provided to address the constraints discovered during project implementation	1(1.3)	1(1.3)	25(33.3)	45(60.0)	3(4.0)	75(100)
The plan is put into place to demonstrate the impact of the projects.	0(0)	3(3.9)	32(41.6)	39(50.6)	3(3.9)	77(100)

In the assessment of adherence to Monitoring and Evaluation (M&E) Structural Framework Practices during the implementation of water and sanitation projects, a notable majority of participants, accounting for 64.5%, agreed that there exists a built capacity to implement M&E when executing projects. This suggests a prevailing positive perception among respondents regarding the establishment of capabilities for effective project monitoring and evaluation. Furthermore, the most of participants, totalling 51.4%, indicated agreement with the constant analysis of constraints during project implementation. This reflects a substantial consensus among respondents on the consistent examination of challenges encountered throughout the execution of water and sanitation projects. Addressing the provision of potential solutions to identified constraints, a significant proportion, constituting 60.0% of participants, agreed that viable remedies are offered during project implementation. This finding underscores a prevailing positive sentiment among respondents regarding the proactive approach taken to overcome challenges and enhance project effectiveness. Lastly, in terms of demonstrating the

impact of projects, a majority of participants, comprising 50.6%, agreed that a plan is effectively implemented for this purpose. This suggests a prevailing acknowledgement among respondents that efforts are made to showcase the tangible outcomes and overall impact of water and sanitation projects.

Table 4.8: Relationship between adherence to M & E Structural Framework and perceived performance of water and sanitation projects provides insights into the correlation between perceived performance and adherence to the Monitoring and Evaluation (M&E) Structural Framework for water and sanitation projects.

Table 4.8: Relationship between Adherence to M & E Structural Framework and Perceived Performance of Water and Sanitation Projects

Correlations

		Perceived performance	Structural framework
Perceived performance	Pearson Correlation	1	.877**
	Sig. (2-tailed)		.000
	N	78	78
Structural framework	Pearson Correlation	.877**	1
	Sig. (2-tailed)	.000	
	N	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

The Pearson Correlation coefficient between perceived performance and the M&E Structural Framework is 0.877 and the statistical significance (two-tailed) is highly significant at the 0.01 level. The correlation coefficient suggests a strong positive relationship between adherence to the M&E Structural Framework and the perceived performance of water and sanitation projects. In other words, as adherence to the M&E Structural Framework increases, there is a corresponding significant improvement in the perceived performance of these projects. This finding implies that the systematic monitoring and evaluation processes, as represented by the

M&E Structural Framework, are closely linked to and have a positive impact on the perceived success of water and sanitation projects.

4.6. M & E Scheduling Practice in Implementation of Water and Sanitation Projects in Langata Sub County

The table provides participants' perspectives on important aspects of scheduling procedures for monitoring and evaluation (M&E) in the course of carrying out project implementation. Critical dimensions that are the subject of the opinions gathered include the organization's regular project appraisals, the thorough auditing of variances in project performance, schedule, and cost, and the efficiency with which requested changes are managed and documented during project implementation. The survey also explores the use of participatory monitoring techniques to assess project performance, comparing them to the use of a random technique for project implementation monitoring. The responses from the respondents also provided insight into how common project mapping techniques are when project activities are being documented.

Table 4.9: Rating of M & E Scheduling Practice in Implementation of Water and Sanitation Projects in Langata Sub County

	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
The organization conducts regular project appraisals	2(2.6)	1(1.3)	15(19.5)	55(71.4)	4(5.2)	77(100)
Variances are audited on performance, schedule and cost of project activities	2(2.7)	1(1.3)	16(21.3)	51(68.0)	5(6.7)	75(100)
The change requested is well handled and documented during project implementation.	2(2.7)	1(1.3)	16(21.3)	46(61.3)	10(13.3)	75(100)
Participatory monitoring and approach are used to determine performance.	2(2.6)	1(1.3)	17(22.4)	51(67.1)	5(6.6)	76(100)
A random approach is used in monitoring project implementation	3(4.1)	1(1.4)	18(24.7)	45(61.6)	6(8.2)	73(100)
Project mapping is conducted during the documentation of project activities	3(4.1)	0(0.0)	20(27.0)	40(54.1)	11(14.9)	74(100)

The majority of participants in the survey strongly agreed (71.4%) that the organization conducts regular project appraisals in the implementation of water and sanitation projects in Langata Sub County. This indicates a high level of consensus among respondents regarding the consistent evaluation of project activities. Following closely, a significant proportion of participants (68.0%) agreed that variances in performance, schedule, and project cost are audited. This suggests a positive inclination toward maintaining a vigilant oversight of key project metrics. A substantial number of respondents (61.3%) agreed that change requests are well-handled and documented during project implementation. This signifies a considerable level of satisfaction with the organization's procedures for managing changes during water and

sanitation projects. In the realm of participatory monitoring and approach, a notable majority of participants (67.1%) indicated agreement with the utilization of this method to determine project performance. This underscores the importance of involving stakeholders in the assessment and evaluation processes. Another significant aspect is the use of a random approach in monitoring project implementation, with a majority of participants (61.6%) agreeing. This suggests a prevalent acceptance of a flexible and adaptive monitoring strategy among respondents. Finally, the practice of project mapping during documentation garnered positive feedback from a majority of participants (54.1%). This implies recognition of the value of project mapping in providing a visual representation of activities, contributing to a comprehensive understanding of the projects under consideration.

The table presents the results of an analysis investigating the relationship between Monitoring and Evaluation (M&E) scheduling and the perceived performance of water and sanitation projects. The Pearson correlation coefficients are used to quantify the strength and direction of the relationship between these two variables.

Table 4.10: Relationship between M & E Scheduling and Perceived Performance of Water and Sanitation Projects

Correlations

		perceived performance	Scheduling
Perceived Performance	Pearson Correlation	1	.903**
	Sig. (2-tailed)		.000
	N	78	78
Scheduling	Pearson Correlation	.903**	1
	Sig. (2-tailed)	.000	
	N	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation between perceived performance and M&E scheduling is reported as a Pearson correlation coefficient of 0.903. The correlation is marked as highly significant at the 0.01 level (two-tailed). The p-value associated with the correlation is less than 0.001 (Sig.=.000), indicating strong statistical evidence against the null hypothesis of no correlation. This result suggests a robust and positive correlation between perceived performance and M&E scheduling. In other words, as M&E scheduling increases, there is a corresponding increase in the perceived performance of water and sanitation projects.

4.7. Rating of Performance of Water and Sanitation Projects in Langata Sub County

The table provides the perspectives of respondents regarding the performance of water and sanitation projects in the study area. Participants were invited to express their opinions on the project's key performance indicators, including the completion of projects within budget and time limits, the sustained provision of water facilities post-completion, the effectiveness of sewage systems in preventing contamination, the availability of prompt local responses in cases of breakdown, and the efficiency of real-time communication and response to emergencies.

Table 4. 11: Rating of Performance of Water and Sanitation Projects in Langata Sub County

	Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly	Total
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Projects are completed within the budget	3(3.8)	1(1.3)	11(14.1)	58(74.4)	5(6.4)	78(100)
Projects are completed within time limits	3(3.9)	2(2.6)	13(17.1)	52(68.4)	6(7.9)	76(100)
project facilities have been having continuous water supply after its completion	3(3.9)	2(2.6)	11(14.3)	51(66.2)	10(13.0)	77(100)
Sewage systems are contained and no contamination	6(7.8)	14(18.2)	15(19.5)	38(49.4)	4(5.2)	77(100)
There is a locally available and timely response in cases of breakdown	8(10.4)	15(19.5)	13(16.9)	38(49.4)	3(3.9)	77(100)
There is real-time communication and response to emerges	2(2.6)	7(9.1)	37(48.1)	25(32.5)	6(7.8)	77(100)

In evaluating the performance of water and sanitation projects in Langata Sub County, the majority of participants agreed that projects are completed within the allocated budget. A substantial 74.4% of respondents indicated a positive view, while 14.1% maintained a neutral stance. Similarly, a significant proportion of participants, constituting 68.4%, affirmed that projects are completed within the specified time limits. When it comes to the continuous water supply after project completion, a majority of 66.2% of respondents acknowledged the sustained functionality of project facilities. Almost half, or 49.4%, agreed that sewage systems are effectively contained, preventing contamination. In terms of a locally available and timely response in cases of breakdown, a significant portion of 49.4% agreed with the effectiveness of response mechanisms. However, 33.5% disagreed to some extent, with 19.5% strongly disagreeing. Finally, about real-time communication and response to emergencies, the highest proportion of participants, constituting 48.1%, maintained a neutral position. A notable 32.5%

agreed with the efficacy of real-time communication, while 19.4% disagreed to some extent, with 9.1% strongly expressing their disagreement.

Generally, the interview findings suggest an improvement in the performance of water and sanitation projects in Nairobi. It was observed that the supply and reliability of the project has increased significantly.

4.8. Regression

The R square is an output that indicates how well the independent variables explain the Performance of Water and Sanitation Projects.

Table 4.12: Contribution of Monitoring and Evaluation Practices to Performance of Water and Sanitation Projects

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947[a]	.897	.891	1.41109

a. Predictors: (Constant), Scheduling, structural framework, Planning, Baseline studies

Statistical analysis is an analysis that shows how the variability in one variable predicts the difference in the other. The study found that 89.7% % of variations in the Performance of Water and Sanitation Projects could be explained by Monitoring and Evaluation Practices.

4.8.1 Analysis of Variance

Analysis of Variance (ANOVA) is used to check the ability of the regression model to be used to predict the relationship between the independent and dependent variables. Using the F-

statistic and the mean square differences the results were computed and presented in Table 4.14 below

Table 4.13: Test of the model ability to predict Performance of Water and Sanitation Projects using Monitoring and Evaluation Practices

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1259.478	4	314.869	158.132	.000[b]
	Residual	145.356	73	1.991		
	Total	1404.833	77			

a. Dependent Variable: perceived performance

b. Predictors: (Constant), Scheduling, structural framework, Planning, Baseline studies

Table 4.13 shows the significance of the regression model in predicting the Performance of Water and Sanitation Projects using Monitoring and Evaluation Practices. The Value of F (4, 100) =42.724, P_Value = 0.000 Shows that using Monitoring and Evaluation Practices significantly Performance of Water and Sanitation Projects

4.8.2 Regression Coefficients

The table (Table 4.14) outlines the results of a regression analysis examining the coefficients associated with Monitoring and Evaluation Practices about the perceived performance of Water and Sanitation Projects. In this analysis, various factors, including Baseline Studies, Structural Framework, Planning, and Scheduling, are assessed for their impact on the perceived performance.

Table 4.14: Coefficient in regression of Monitoring and Evaluation Practices with perceived Performance of Water and Sanitation Projects

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.754	1.019		-1.722	.089
Baseline studies	.257	.100	.272	2.565	.012
structural framework	.490	.131	.277	3.737	.000
Planning	.210	.098	.224	2.148	.035
Scheduling	.204	.089	.226	2.299	.024

a. Dependent Variable: perceived performance

Moving to specific variables, the coefficient for Baseline Studies is 0.257, with a standard error of 0.100. The standardized coefficient (Beta) is 0.272, and the t-value is 2.565. The significance level (Sig.) is 0.012, indicating a statistically significant positive relationship between Baseline Studies and perceived performance. The coefficient for Structural Framework is 0.490, with a standard error of 0.131. The standardized coefficient is 0.277, and the t-value is 3.737, showing a highly significant positive relationship (Sig. = 0.000) between Structural Framework and perceived performance. For Planning, the coefficient is 0.210, with a standard error of 0.098. The standardized coefficient is 0.224, and the t-value is 2.148. The significance level is 0.035, suggesting a statistically significant positive relationship. Scheduling also exhibits a positive relationship, with a coefficient of 0.204, a standard error of 0.089, a standardized coefficient of 0.226, and a t-value of 2.299. The significance level is 0.024, indicating statistical significance.

4.9 Summary of Findings and Discussions in Relation to the Literature Review

This study's literature review presented a comprehensive depiction of M&E practices and how they influence water and sanitation practices, particularly in developing countries such as Kenya (Pretorius, Steyn & Jordaan, 2012). According to Béné, Frankenberger, and Nelson (2015) and USAID (2017), the literature review highlights the role played by M&E in project performance while identifying existing gaps and suggesting ways to improve project outcomes. The literature review also highlighted the importance of proper M&E planning, empirical analysis, and baseline studies in such projects.

The results of this study underscore the significance of incorporating M&E practices in water and sanitation projects (UNDP, 2012). By analyzing factors such as gender dynamics, age distribution, education, and tenure in water and sanitation projects in Langata Sub County, this study provides valuable insight into workforce demographics and how they influence both M&E practices and project outcomes.

The findings of the study reveal notable trends in the demographic profile of the staff, with the majority being male (70.5%) and predominantly middle-aged (36-45 years). Most of the staff also have diploma-level education and have worked for a maximum of 5 years at their respective water and sanitation organizations. Based on these insights, the workforce composition shows that water and sanitation projects have a unique blend of youthful talent, experience, and knowledge that would position them to benefit and grow from M&E practices.

This study also investigates the link between M&E practices and the performance of water and sanitation projects drawing from the insights od the literature review, particularly the findings of Mugo and Oleche (2015). The main factors that are looked at include budgeting,

M&E planning, and project scheduling (Phiri, 2015). These results indicate that effective planning and proper budgeting increases the likelihood of project success and peak performance, which is in line with previous research (Mugo & Oleche, 2015).

Overall, this study's findings contribute to existing knowledge on how M&E practices influence water and sanitation projects in developing countries, particularly Kenya. By mirroring the findings of other studies such as Béné, Frankenberger, and Nelson (2015), this research cements existing knowledge on the relationship between monitoring evaluation and project performance. It provides valuable insights that can be leveraged by stakeholders such as policymakers and project managers to improve the water and sanitation sector in Langata Sub County and Kenya at large.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Introduction

This chapter provides a summary, conclusion and recommendations. The findings of the study are summarized based on the objectives. Each objective is addressed individually, delving into the nuances and intricacies of the data collected, observed patterns, and emerging themes. This thorough examination serves to provide a detailed and nuanced perspective on the research questions posed at the outset of the study.

5.2. Summary of the study

The study involved 103 participants, and 78 questionnaires were deemed to have sufficient data, resulting in a response rate of 76%. This rate was considered acceptable for drawing conclusions according to Kothari's recommendation of a 50% or higher response rate. Demographic information was collected from staff at the Nairobi Water Company, Langata Sub County. The majority of respondents were male (70.5%), with varying ages, education levels, and durations of work in the water sector.

The assessment of water and sanitation projects in Langata Sub County reveals that a substantial majority of participants were satisfied with the completion of projects within the allocated budget (74.4%) and specified time limits (68.4%). A significant portion (66.2%) acknowledges the sustained functionality of water supply projects post-completion, while opinions on sewage systems are more divided, with 49.4% agreeing on their effectiveness. However, there are concerns about sewage system functionality, as 28.0% express disagreement. The evaluation also highlights mixed perceptions regarding the efficiency of response mechanisms, with 49.4% in agreement, 33.5% in disagreement, and 19.5% neutral.

Similarly, real-time communication and response to emergencies receive varied feedback, with 32.5% neutral, 32.5% in agreement, and 19.4% expressing disagreement.

5.2.1. M & E Baseline Studies and Perceived Performance of Water and Sanitation Projects

Most participants (59.0%) were neutral about whether baseline data was collected before project commencement. Half of the respondents (50.0%) agreed with establishing baselines on a rolling basis. Prompt collection of baseline data before project implementation received mixed responses, with 51.9% neutral and 37.7% in agreement. In terms of collecting quality data, 51.3% maintained a neutral position, while 37.2% agreed. Regarding responsibilities for baseline data tasks, 46.8% agreed while 42.9% remained neutral. On the availability of resources for baseline data collection, 45.5% were neutral while 42.9% agreed. Stakeholder consultation on indicators saw 49.3% agreement, and 37.3% expressed a neutral position. It was further observed that there existed a highly significant positive correlation (Pearson Correlation coefficient = .910) was found at the 0.01 level, indicating a robust relationship.

5.2.2. M & E Planning Practice and Perceived Performance of Water and Sanitation Projects

The majority of participants strongly agreed that monitoring plans were well applicable in organizational activities (68.8%), employees are well trained on effective monitoring planning practices (64.1%), network diagrams and frameworks are actively employed in scheduling organizational projects (65.4%), and stakeholder analysis surveys are conducted before planning (68.0%). A high percentage (70.5%) also agreed that stakeholders' roles match their experience and qualifications. Additionally, a technologically oriented approach to project management was highlighted, with 64.9% strongly agreeing that the organization utilizes

project management software for monitoring plans. In terms of rapid assessment in monitoring plans for projects, 60.3% of participants provided a strong agreement. The overall responses indicate a positive perception and widespread acceptance of effective M&E planning practices in the implementation of water and sanitation projects in Langata Sub County. The relationship between M&E planning and the perceived performance of water and sanitation projects was examined, revealing a very strong positive correlation (Pearson Correlation coefficient of .903) with statistical significance at the 0.01 level.

5.2.3. M & E Structural Framework and Perceived Performance of Water and Sanitation Projects

The assessment of Monitoring and Evaluation (M&E) Structural Framework Practices in water and sanitation projects in Langata Sub County revealed positive sentiments among participants, with 64.5% expressing confidence in the built capacity for M&E implementation. A substantial number of respondents agreed on constant constraint analysis (51.4%) and the provision of viable remedies to challenges (60.0%), reflecting a proactive approach to project effectiveness. Participants also acknowledged efforts to showcase project impact (50.6%). The Pearson Correlation coefficient of 0.877, highly significant at the 0.01 level, indicates a strong positive relationship between adherence to the M&E Structural Framework and perceived project performance.

5.2.4. M & E Scheduling Practice in Implementation of Water and Sanitation Projects in Langata Sub County

The survey findings in Langata Sub County indicate a strong consensus among participants on the organization's water and sanitation project implementation practices. Noteworthy points include high agreement percentages for regular project appraisals (71.4%), auditing of

variances (68.0%), and satisfactory handling of change requests (61.3%). Stakeholder involvement in participatory monitoring (67.1%) and a flexible random approach to project monitoring (61.6%) received significant support. The majority (54.1%) also positively acknowledged the value of project mapping during documentation. The correlation analysis revealed a highly significant and robust positive correlation (Pearson coefficient of 0.903, p-value < 0.001) between perceived project performance and Monitoring and Evaluation (M&E) scheduling.

5.3. Conclusion of the study

The study concludes that baseline data collection significantly contributed to the performance of water and sanitation projects a significant correlation (Pearson Coefficient = .910) exists between perceived project performance and M&E baseline studies, emphasizing their substantial relevance.

Conclusively, M&E planning practices significantly contributed to the performance of water and sanitation projects with a very strong positive correlation (Pearson Coefficient = .903) established between these practices and the perceived performance of water and sanitation projects.

The study concludes that adherence to the structural framework significantly contributes to project performance, as evidenced by a strong positive relationship (Pearson Coefficient = 0.877) between adherence to the structural framework significantly contributes to project performance.

Finally, M&E scheduling had a significant contribution to the performance of water and sanitation projects as implied a strong positive correlation (Pearson Coefficient = .903) exists

between perceived project performance and M&E scheduling, highlighting its reliability and significance.

5.4. Recommendations of the Study

The study recommends that water and sanitation projects consider standardizing the approach to baseline data collection before commencement to address the diverse opinions observed. Additionally, emphasis should be placed on the prompt and quality collection of baseline data to enhance project planning and evaluation.

Based on the positive perceptions of M&E planning practices, the study suggests continued investment in employee training on effective monitoring planning practices. Organizations should also explore the integration of technology, such as project management software, to further enhance the efficiency and effectiveness of M&E planning processes.

The study recommends maintaining and strengthening the built capacity for M&E implementation in water and sanitation projects. Organizations are encouraged to sustain proactive approaches, including constant constraint analysis and provision of viable remedies, to address challenges promptly. Efforts to showcase project impact should be further emphasized.

Given the strong consensus on positive project implementation practices, the study recommends the continuation of regular project appraisals, auditing of variances, and stakeholder involvement in participatory monitoring. Organizations should consider further emphasizing project mapping during documentation to enhance project value and perception.

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APPENDIX I: LETTER OF INTRODUCTION AND INFORMED CONSENT

Date: _____

Participant's Name: _____

Participant's Address: _____

SECTION A: INTRODUCTION TO THE STUDY

The purpose of this study is to investigate monitoring and evaluation (M&E) and the performance of water and sanitation projects in Langata Sub County. Its objectives include to assess the effect of the baseline survey, M&E planning, budgetary allocation, and evaluation scheduling on the performance of water and sanitation projects in Langata Sub County, Nairobi County, Kenya.

SECTION B: STUDY PROCEDURES

If you choose to participate in this study, you will contribute by completing a questionnaire with your personal and work information. Some of the data you will be asked to provide include gender, age, education, and tenure at your current water and sanitation company. All your responses will be used for academic research purposes and stored confidentially.

SECTION C: BENEFITS OF PARTICIPATION

By participating in this study, you will contribute to the knowledge of how M&E practices influence the performance of water and sanitation projects in Langata Sub County. The results will inform future policies and decisions that will drive the water and sanitation industry forward.

SECTION D: INFORMED CONSENT

Participation in this study is on voluntary basis. As a participant, you are free to withdraw from the study at any time. Please note that it is important for you to understand what this project entails and how your data will be handled before committing your participation.

SECTION E: CONFIDENTIALITY

All data collected during this study will be stored confidentially and anonymously. Only the research team will be able to access the raw data. This way, utmost confidentiality will be ensured.

SECTION F: ACKNOWLEDGEMENT OF CONSENT

By signing this form, you acknowledge that you have read and understood all the information in this letter and are willing to consent to participate in the study.

Participant signature: _____

Date: _____

APPENDIX II: QUESTIONNAIRE

This questionnaire contains four regions, which will take you a few minutes to complete. Please respond correctly to the item provided. This is an exercise meant for academic purposes and all data gathered from respondents will be held with strict confidentiality.

SECTION A: RESPONDENT'S BASIC INFORMATION

1.What is your gender?

Female [ ] Male [ ]

2. How old are you?

Below 25 years [ ] 26-35 years [ ] 36-45 years [ ]

46-55 years [ ]Above 55 years [ ]

3. What is your level of Education?

Certificate [ ] Diploma [ ] Degree [ ] Masters [ ]

PHD [ ]

4. For how long have you worked in the ministry of water in the County government?

Less than 2 years [ ] 2 to 5 years [ ] 6 to 9 years [ ]

10 years and above [ ]

5. Which division do you work in?.....

6. What automated systems do you use in your department/division?.....

SECTION B: M & E BASELINE STUDIES

7. For this question, please respond by ticking the appropriate box on the extent to which you agree with each of the statements that follow using a scale of 1-5 where 5 = Agree Strongly, 4=Agree, 3=Neutral, 2= Disagree, 1= Disagree Strongly

		SD=1	D=2	NS=3	A=4	SA=5
a.	Baseline data was collected before the project commencement					
b.	Baselines are established on a rolling basis					
c.	The project was not commissioned until late in the project and no baseline data collection was planned					
d.	The baseline data required for the project was collected promptly?					
e.	The data was of satisfactory quality and provided all of the required information					
f.	There was a clear definition of who is responsible for the collection, analysis and dissemination of the baseline data					
g.	The resources were available in time to collect the baseline data before a project implementation begins					
h.	Stakeholders were consulted on the appropriate output and outcome indicators to measure and other information to include.					

SECTION C: M & E PLANNING

8. For this question, please respond by ticking the appropriate box on the extent to which you agree with each of the statements that follow using a scale of 1-5 where 5 = Agree Strongly, 4=Agree, 3=Neutral, 2= Disagree, 1= Disagree Strongly

		SD=1	D=2	NS=3	A=4	SA=5
a.	Monitoring plans are well applicable in organizational activities					
b.	Employees are well trained on effective monitoring planning practices in organization projects					

c.	Network diagrams and frameworks are used in scheduling organization projects					
d.	The organization conducts stakeholder analysis surveys on its resources before it plans.					
e.	Stakeholders' roles match their experience and qualifications in the organization.					
f.	The organization uses project management software for monitoring plans.					
g.	Rapid assessment is conducted in monitoring plans used in projects					

SECTION D: M & E STRUCTURAL FRAMEWORK

9. For this question, please respond by ticking the appropriate box on the extent to which you agree with each of the statements that follow using a scale of 1-5 where 5 = Agree Strongly, 4=Agree, 3=Neutral, 2= Disagree, 1= Disagree Strongly

		SD=1	**D=2**	**NS=3**	**A=4**	**SA=5**
a.	The capacity was built to implement M & E					
b.	There was a constant analysis of the constraints during project implementation					
c.	Potential solutions were provided to address the constraints discovered during project implementation					
d.	The plan was put into place to demonstrate the impact of the project.					

SECTION E: M & E SCHEDULING

10. For this question, please respond by ticking the appropriate box on the extent to which you agree with each of the statements that follow using a scale of 1-5 where 5 = Agree Strongly, 4=Agree, 3=Neutral, 2= Disagree, 1= Disagree Strongly

		SD=1	D=2	NS=3	A=4	SA=5
a.	The organization conducted monthly project appraisals					
b.	There was a proper technique for forecasting project activities					
c.	Variances were conducted on performance, schedule and cost of project activities					
d.	The change requested was well handled and documented in the organization.					
e.	Participatory monitoring and approach were used to determine performance.					
f.	The stochastic method was used in monitoring practices					
g.	Project mapping was conducted in project activities					

SECTION H: PERFORMANCE OF WATER AND SANITATION PROJECTS IN LANGATA SUB COUNTY

13. For this question, please respond by ticking the appropriate box on the extent to which you agree with each of the statements that follow using a scale of 1-5 where 5 = Agree Strongly, 4=Agree, 3=Neutral, 2= Disagree, 1= Disagree Strongly

	STATEMENTS	SD=1	D=2	NS=3	A=4	SA=5
a.	Projects are completed within the budget					
b.	Projects are completed within time limits					

c.	project facilities have been having continuous water supply after its completion					
d.	Sewage systems are contained and no contamination					
e.	There is a locally available and timely response in cases of breakdown					
f.	There is real-time communication and response to emerges					

APPENDIX III: KEY INFORMANT INTERVIEW SCHEDULE

1. How important is the monitoring and evaluation in water and sanitation project implementation? Explain.

2. What approaches/ practices do you adopt to ensure the project's performance, and why?

3. How is the process of monitoring and evaluation baseline studies practices implemented in Nairobi County?

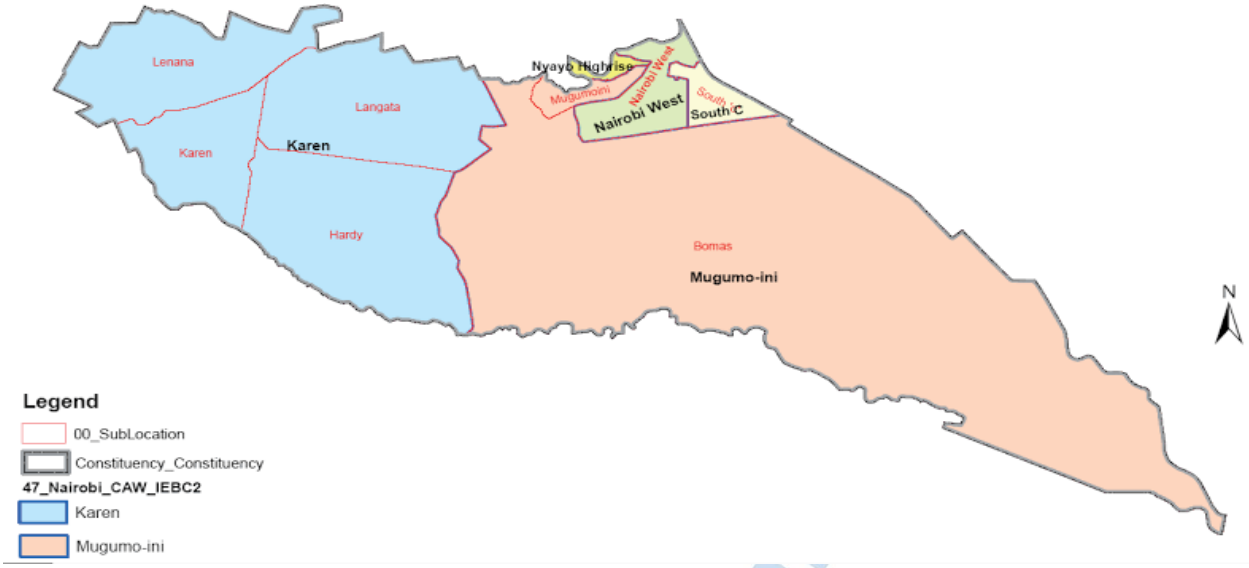
4. How is the process of monitoring and evaluation planning practices implemented in Nairobi County?

5. How are the monitoring and evaluation structural framework practices in Nairobi County?

6. How is the process of monitoring and evaluation scheduling practices implemented in Nairobi County?

7. comment on the performance of water and sanitation projects in Nairobi County

APPENDIX IV: STUDY AREA MAP



APPENDIX IV: PLAGIARISM REPORT

MONITORING AND EVALUATION PRACTICES AND PERFORMANCE OF WATER AND SANITIZATION PROJECTS IN LANGATA SUB COUNTY, NAIROBI COUNTY, KENYA

ORIGINALITY REPORT

20%	17%	3%	11%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Mount Kenya University Student Paper	4%
2	erepository.uonbi.ac.ke Internet Source	2%
3	Submitted to Kenyatta University Student Paper	2%
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19	ir.jkuat.ac.ke Internet Source	<1%
20	washfunders.org Internet Source	<1%