MONITORING AND EVALUATION PRACTICES AND PERFORMANCE OF WATER POINTS FOR AGRO-PASTORAL PROJECT IN SOMALIA

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RESEARCH PROJECT REPORT PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN PROJECT PLANNING AND MANAGEMENT FACULTY OF BUSINESS AND MANAGEMENT SCIENCES UNIVERSITY OF NAIROBI

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DECLARATION

This research project is my original work and has not been presented in any other university

Signature:  Date: 08th November 2022

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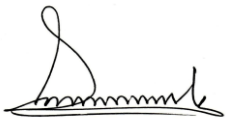
This research project has been submitted for presentation with my approval as the university supervisor

Signature:  **Date: ___08th November 2022_____**

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DEDICATION

To my wife Kowthar Yusuf, my son Akram Ahmed Hassan, my parents and my siblings

ACKNOWLEDGEMENT

I appreciate, Prof. Charles Mallans Rambo for guidance and instructions that enabled me to clear this project.

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ABBREVIATIONS AND ACRONYMS

M&E	Monitoring and Evaluation
NDP	National Development Plan
NGOs	Non-Governmental Organizations
PLS-SEM	Partial Least Square Structural Equation Modelling
SPSS	Statistical Package for Social Sciences

ABSTRACT

In Somalia, there is scarcity of permanent sources of water supply that is essential for the survival of the human population and livestock. During the middle of the dry season, most of these water points dry up leading to a severe scarcity of water that in extreme cases results in the death of humans as well as livestock. During prolonged droughts, it is typical practice in these types of areas to transport water using trucks. These reservoirs have waters that are contaminated with organic materials, as well as silt and sometimes garbage. Thus, the purpose of the study was to establish the extent to which monitoring and evaluation practices influence performance of water Points for Agro-pastoral project in Somalia. The study's objectives revolved around determination of effect of M&E planning, M&E training, data management and utilization of M&E results in relation to performance of water Points for Agro-pastoral project in Somalia. The study was anchored on realistic evaluation theory and the theory of change. Mixture of of descriptive survey and correlational research designs was adopted targeting 87 M&E managers, M&E learning officers, data analysts and research assistants from two water Points for Agro-pastoral project in Somalia. Stratified random sampling technique was used to select 71 respondents which were determined scientifically through Yamane formula. Primary data was gathered through a questionnaire that had been pilot tested among 7 respondents who were not included in the final study. Validity and reliability of the questionnaire will be ensured before gathering information from participants by self. The gathered information was analyzed through Statistical Package for Social Sciences guided by percentages, means and regression analysis and presented through tables. The study observed that utilization of M&E results (β=0.428) had the greatest effect on project performance then M&E Training (β=0.242), data management (β=0.228) and lastly M&E planning (β=0.223). The study concludes that M&E practices are significant drivers of project performance. The study recommends that project managers in the water Points for Agro-pastoral project in Somalia should take a participatory approach in M&E planning where all concerned stakeholders need to be actively involved in the process. The human resource managers working in water Points for Agro-pastoral project in Somalia should provide regular training to project staff to equip them with relevant skills. Future research should focus on establishing other factors aside from M&E practices that have an effect on performance of water Points for Agro-pastoral project in Somalia

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Performance of water points for Agro-pastoral project has attracted significant level of attention among scholars and policy makers around the world. As observed by Kpéra (2015) most water points for Agro-pastoral project in countries like Benin do attract an array of stakeholders including the crocodiles that end up using the water for various purposes and this creates conflict among the users. According to Behnke and Kerven (2011), most of the water points for Agro-pastoral project in North-Eastern parts of Ethiopia do operate below their full potential. At the same time Ehiya and Maisonnave (2017) shared that water points for Agro-pastoral project are mostly designed to solve the issue of water scarcity and the rivalry encountered in access water resources among the pastoral communities. Performance of water points for Agro-pastoral project is the condition in which an intervention achieves the point at which it fulfills the predetermined goals (Kusek & Rist, 2004).

The utilization of M&E and key indicators are both helpful in establishing whether or not a project was successful (Kihuha, 2018). The performance of a project can be evaluated in a quantitative manner by looking at key indicators, which are things that, if observed appropriately, can provide such an appraisal. The objectives that have been set serve as the basis for the development of the indicators (Kusters, Buck, de-Graaf, Minang, va-Oosten & Zagt, 2018). When all of the important components have been satisfied, the end product for the project will be complete. The key components could be the number of goals that were completed or the scope of the work. At the beginning of a project, a decision is made regarding its overall scope as well as its goals. This decision is made so that the project will have a better chance of succeeding in reaching its goals (Reynolds & Sutherland, 2013, PMI, 2014).

Globally, the M&E practices became core part of the project cycle and adopting practices which is include regularly training the M&E staff, hiring skilled M&E personnel and using Management Information system to collect M&E data to increment project productivity, management and implementation (Muindi, 2018). The deployment of M&E practices sets the stage for all stakeholders involved in the development projects to evaluate the status of the projects and determine whether or not they are on track to deliver the intended benefits. Utilization of M&E data results in an effective manner, as well as appropriate allocation of

M&E resources and M&E budget, are essential for the successful accomplishment of goals and objectives associated with development projects (Maalim, 2017).

Monitoring provides data to the project stakeholder which have several goals and results at a specific given time and it is descriptive in nature (Nyonje et al., 2012). Evaluation occurs when the objectives guiding the project are analyzed to establish the extent of their realization (Ogula, 2012). Evaluation of projects effectiveness, efficiency, and overall influence are among the goals of M&E. The decision-making process should include applying lessons learned. It also concerns the worth or significance of a specific course of action, choice, or program (Armstrong & Baron, 2013)

In Somalia according to a study that was carried out by FAO-SWALIM (2007), the Agricultural and Livestock sectors play a key role in food security, natural resources management, and environmental protection in Somalia. Due to the fact that many regions lack permanent sources of water supply, Structures that collect water from the surface, such as sand dams and water catchments, are essential to the survival of the human population and livestock. However, during the middle of the dry season, these dry up, which leads to a severe lack of water that in extreme cases results in the death of humans as well as livestock. During prolonged droughts, it is typical practice in these types of areas to transport water using trucks. These reservoirs have waters that are contaminated with organic materials, as well as silt and, sometimes, garbage. Additionally, there is a significant possibility of biological contamination. Due to the problems of quantity, quality and consumption of Agriculture and Livestock, the present inquiry was justified.

1.2 Problem Statement

Effective monitoring and evaluation are essential requirement for performance of any project. In Somalia, most pastoral and small-scale Agriculture communities suffer shortage of water during dry seasons. The availability of clean water is one of the most important preconditions for sustainable development of any country. Since Somalia is located in a region that experiences extremely low levels of rainfall and therefore a limited supply of water, the country's environmental, social and economic development are dependent, to a large extent, on improvements in water security brought about by more efficient management of the country's water resources. The amount and quality of Somalia's water resources are both extremely limited, and the country's water security position is further exacerbated by the regular occurrence of both droughts and floods.

Considering the ninth's National Development Plan (NDP 9) priorities in Economic Pilar, the project titled "Somalia—Water for Agro-pastoral Productivity and Resilience (Biyoole)" were developed by World Bank funds $42 million with the implementation of Federal Government Somalia (WB, 2019). In spite of the fact that monitoring and evaluation are essential for enhancing the achievements of outcomes and the performance of projects, government departments and institutions continue to get strong endorsement on the need to invest in monitoring and evaluation.

The existing studies like Muniu (2017) focused on M&E practices, participation at community level and sustainability of water projects in Nyeri. The study pointed out existence of a significant nexus. The study done by Murorunkwere and Munene (2022) was an assessment of M&E practices and performance of projects in Rwanda. It was shown that all these proxies of M&E practices played a critical role as far as project performance is concerned. Olala and Nyonje (2020) conducted an inquiry with focus on M&E practices and performance of project. It was observed that in as much as M&E practices significantly predicted project performance. Wambua (2019) conducted an inquiry with emphasis on M&E practices and their nexus with performance of education projects in Makueni. It was shown that M&E practices and performance of projects is significant connected.

The aforementioned studies like Murorunkwere and Munene (2022) were done in other countries like Rwanda and not in Somalia. Other studies like Wambua (2019) focused on education projects that differ from water Points for Agro-pastoral project. There are other studies like Olala and Nyonje (2020) that were not empirical but simply adopted desk research method. In view of these gaps, the present study was justified.

1.3 Purpose of the Study

The purpose of the study was to establish the extent to which monitoring and evaluation practices influence performance of water Points for Agro-pastoral project in Somalia

1.4 Research Objectives

i. To establish the influence of M&E planning on performance of water Points for Agro-pastoral project in Somalia.

i. To investigate the influence of M&E Training on performance of water Points for Agro-pastoral project in Somalia.

ii. To assess how data management influence performance of water Points for Agro-pastoral project in Somalia.

iii. To determine the influence of utilization of M&E results on performance of water Points for Agro-pastoral project in Somalia.

1.5 Research Questions

i. To what extent does M&E planning influence performance of water Points for Agro-pastoral project in Somalia?
ii. How M&E training influence performance of water does Points for Agro-pastoral project in Somalia?
iii. How does data management influence performance of water Points for Agro-pastoral project in Somalia?
iv. Does utilization of M&E results influence performance of Water Points for Agro-Pastoral Project in Somalia?

1.6 Significance of the Study

The study was expected to guide the project managers including the M&E officers of Water Points for Agro-Pastoral Project in Somalia to review and enhance the M&E practices that are in place. The stakeholders of the Agro-Pastoral Project in Somalia including the beneficiaries were expected to understand and appreciate the need to utilize the M&E results for informed decision making. The policy makers working in the Water Points for Agro-Pastoral Project in Somalia were anticipated to be in position to develop sound policies. The study was hoped to contribute to the existing knowledge as far as M&E practices and performance of Water Points for Agro-Pastoral Project in Somalia was concerned. The outcome of this study was expected to potentially serve as the secondary source data for other researchers in same field. The study would help to strength policy formulation by the National Water Resource strategy and Somalia Livestock Sector development strategy.

1.7 Limitations of the Study

Some of the respondents failed to consider the objectivity of the questions that were being asked. However, researchers guaranteed that respondents felt secure participating in the study by protecting the respondents' right to privacy, as well as ensuring the accuracy of the information they provide. Additionally, there was a limited amount of financial resources; despite this, the researcher made an effort to make the most of the money that was available by conducting interviews with beneficiaries on the meeting days. With limited consent, professionals in the practice and academic fields had different conceptual and operational definitions of project performance. This made it difficult to make a comprehensive study of

all the factors affecting the performance of water points for Agro-Pastoral projects given the scope of this study.

1.8 Delimitations of the Study

The study sought to provide the nexus between monitoring and evaluation practices and project performance. More specifically, the focus of the study was on M&E planning, M&E training, data management as well as utilization of M&E results with regard to project performance. The study focused on water Points for Agro-pastoral project in Somalia, this was selected because pastoralism is the major economic activity in the country and providing an intervention to water livestock is anticipated to go a long way in building resilience for the pastoral communities. The study was conducted in Somalia because it is one of the countries that are currently seeking to recover from past civil war and political turmoil that were witnessed for about a decade.

1.9 Assumptions of the Study

It was premised that the individuals chosen to participate will work together and be able to deliver the necessary information in a trustworthy manner. It was expected that the data obtained from this research was extremely significant in emphasizing the key concerns.

1.10 Definition of Significant Terms used in the Study

M&E Planning include the goals and objectives, financial planning as well as human resource planning

M&E Training is used in this study to include training needs analysis, training content, skills and proficiency

Data Management include the tool for gathering data, storage and retrieval of data as well as data mining and analysis processes of the Agro-pastoral project

Utilization of M&E results is the use of the M&E reports by stakeholders of Agro-pastoral project to make decisions, in practices as well as for knowledge creation

Performance of water Points for Agro-pastoral project include the quality, access and availability of the water points

M&E practices include M&E planning, M&E training, data management and utilization of the M&E results by stakeholders of the Agro-pastoral project

1.11 Organization of the Study

In the first chapter, a discussion of the background information, the problem, purpose and objectives are outlined. Other issues covered here include the questions, significance, limiting issues, premises and the definition of key terms. Literature is reviewed in the second chapter, the methodologies are outlined in third chapter, findings and presentation in fourth chapter and summary, discussions, concluding and recommending remarks are also shown.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is the review of literature covering the realistic evaluation theory and theory of change. Empirical review is also covered in chapter two focusing on M&E planning, M&E training, data management, utilization of M&E results as well as M&E all in relation to performance of water Points for Agro-pastoral projects.

2.2 Theoretical Review

2.2.1 Realistic Evaluation Theory

The proponent of this theory was Pawson (1997) and it describes the possible outcomes that can arise from the project. This theory help the M&E staff including evaluators to have an understanding of the aspects of the intervention that can increase its effectiveness and the relevant contextual factors that are desirable (Tilley & Pawson, 2000). The theory strives to find the contextual issues and situations that enhances the effectiveness of a given intervention and thus coming up with lessons in respect to how the outcomes are produced from the same intervention (Holma & Kontinen, 2011). The theory can be critical in comprehending how the deliverables are produced in the course of M&E process.

The focus of the present study is on M&E practices as the independent variable. This theory will be used to explore the salient features under which M&E practices covered by this study are deemed to be effective. It is hoped that a clear understanding of such conditions would contribute to making the M&E exercise in a project organization to be more effective.

2.2.2 Theory of Change

The proponent of this theory of change is Weiss (1995) and it has widely been adopted in studies and literature on M&E. This theory argues that change is realized through constant decisions that are informed and based on data and strategies that have undergone assessment and evaluation as well as communication so as to bring about an enhancement (Funnell & Rogers, 2011). The theory is established on the need to identify how change can be initiated and determination of the individual responsibilities and roles (Funnell & Rogers, 2011). The theory has been adopted in monitoring of various types of projects in private as well as public domain. The theory is applicable in situations where a number of activities have been implemented in a way that is controlled aimed at realizing the given outcomes. The theory is

also applicable in situations where the cause and effect link is known (Brousselle & Champagne, 2011).

The theory offers a framework that can usefully be applied in M&E endeavours of the firm. To some extent, M&E result into some changes in a project as guided by the results and the reports. It is important to have an understanding of post M&E changes with regard to the political and economic as well as social point of views (Funnell, 2000). The theory places emphasis on generation of knowledge concerning the effectiveness of the project besides providing an explanation of the methods that are required to achieve effectiveness in the project (Zohar, Simeone, Morelli, Martelloni & Marmo, 2022). M&E practices help in testing and redefining road map and communication is critical in attaining the destination as it helps to stimulate change (Millstone, Van Zwanenberg, & Marshall, 2010). This theory will help in understanding the changes that can be occasioned by the M&E results and how the project organizations implement the same in order to enhance project performance. More specifically, the theory is used to anchor the variable M&E training and the change in brings in the project organization.

2.3 Empirical Studies

The subsequent sections provide a review of past empirical studies as informed by the research objectives of the study.

2.3.1 M&E Planning and Performance of water Points for Agro-pastoral project

A study was done by Odhiambo, Wakibia and Sakwa (2020) whose focus was on M&E planning and the implication on implementation of projects aimed at alleviating poverty in Coastal parts of Kenya. The variables embraced in this study included timelines, progress tracking, periodic reporting as well as mid-term as well as end-term evaluation. The type of design adopted was cross sectional survey and the processing the results involved the use of factor analysis, correlation as well as regression analysis. It emerged from factor analysis that while outcome effectiveness greatly predicted project implementation, progress tracking and timeliness were the key measures of M&E planning. A strong and direct nexus was registered through correlation analysis between M&E planning and implementation of project.

Van-Ongevalle, Huyse and Van-Petegem (2014) did an analysis of how to deal with complexity in the planning of the M&E phase of the project. The research was based on evidence from a collaborative action research project that covered the period from 2010 all through to 2012. The project study covered 10 development organizations from Belgium and

Dutch. It emerged that the key challenge that firms were working to counter during the action research revolved around the need to demonstrate observable results in contexts that are so complex where it is not always easy to measure and quantify results in such contexts. In these complex situations, the cause effect nexus cannot always be predicted with certainty.

Byegon, Gakuu and Kidombo (2022) did an analysis whose focus was on planning for M&E and its predictor role in performance of health projects in Kibera. The inquiry hypothesized that in both developed and developing nations; non-governmental organizations have demonstrated their commitment towards implementation of a number of health interventions with the aim of mitigating against disturbance in health services. In total, 367 respondents were targeted from which 269 were sampled through simple random and stratified proportion technique of determination of study sample. Mixed approaches were embraced in that the analysis was descriptive in nature and percentages as well as means and regression guided the analysis process. The results were that planning for M&E is a significant predictor of performance of health projects.

Mugo, Keiyoro, Iribe and Rambo (2016) placed focus on M&E planning as far as sustainability of agricultural projects were concerned. The specific case for the study was Nyeri County. The study leveraged the descriptive survey and correlational designs targeting agriculture officers and farmers in charge of agriculture projects. A total of 211 were sampled through stratified random technique after the same had been determined scientifically using the Yamane formula. Out of the total number of 211 questionnaires that respondents received for capturing their information, 206 were completed and return back for further analysis that entailed means and percentages and regression. It was observed from the results that M&E planning is a strong and positive predictor of sustainability of agriculture projects. The focus of the study by Ngigi (2020) was on M&E planning as one of the proxies of M&E and its implication on implementation of projects by Acted Kenya. The targeted respondents covered 125 staff of Acted Kenya and the design adopted was descriptive survey. Sampling of the participants entailed the use of stratified random technique. Information was gathered from first hand sources guided by the structured questionnaire. The analysis adopted descriptive and inferential statistics. It emerged from the results that M&E planning had significant effect on project implementation. Participants observed that planning strategies were implemented by Acted Kenya on time.

2.3.2 M&E Training and Performance of water Points for Agro-pastoral project

The study by Amolo, Rambo and Wafula (2021) was on M&E capacity building and performance of projects involving construction of roads in Kisumu. Descriptive cross-sectional survey design was embraced with information being gathered through the questionnaire. Information was quantitative in nature and the study entailed testing of some formulated hypotheses. It emerged that M&E capacity building has significant implication on performance of the projects involving construction of roads. In a study done by Ooko, Rambo and Osogo (2018), the main focus was on human capacity for M&E systems and the need to provide health care related services in institutions in the public domain in Migori. The adopted research design was descriptive survey and sample covered doctors, nurses, M&E staff, social workers and patients. Information gathering was supported by questionnaire and interview guide. It emerged from analysis that technical support contributed towards an increase in knowledge with regard to M&E system to a moderate degree. Furthermore, capacity building in M&E was seen to have contributed towards an increase in access on health services.

The study by Morkel and Ramasobama (2017) focused on M&E capacity initiatives in Africa. The study was conducted through a review of literature supported by desk review followed by survey of few representatives in managerial positions. It emerged from analysis little evidence exists that provides an indication of whether evaluation capacity building outcomes, activities and processes are effective. It was also asserted that there is need for more empirical literature for building a clear comprehension of the conditions needed in evaluation capacity building within the context of Africa. An investigation of M&E on performance of projects at African Virtual University in Kenya was conducted by Phiri (2015). In this study, one of the objective variables was M&E training besides M&E planning, baseline surveys. The unit of analysis was two projects that had been implemented and a mixed research design of survey and ex-post facto was adopted. Information was gathered from first hand sources and quantitative and qualitative methods were embraced during the analysis. It emerged that M&E activities like training significantly contribute to project performance. It was observed that M&E training was in place for all the institutions that participated.

Kithinji (2019) did an appraisal of the capacity to evaluate capacity building efforts and its link with an improvement in M&E within the NGO context. The study was supported by pragmatism paradigm guided by descriptive survey design. Sampling was conducted through

use of stratified random method. A Likert based structured questionnaire was adopted in gathering the views from the participants. Information from the questionnaire was triangulated with the qualitative responses sought through the interview guide. It emerged that most NGOs in Meru were carrying out a number of unstructured activities aimed at building evaluation capacity and these actions had significant implication on the M&E function. Kithinji (2015) conducted an inquiry with focus on evaluation capacity building, M&E activities, change at an organizational level and utilization of results among NGOs in Meru. A detailed review of literature was conducted to develop testable hypotheses. Pragmatism paradigm was embraced guided by descriptive survey design. Stratified random technique was adopted in selecting 218 participants from the targeted 504 respondents. Information was obtained using questionnaire that had been structured. From regression results, it emerged that evaluation capacity undertakings ranging from professional development and M&E support had a significant implication on the utilization of the results.

2.3.3 Data Management and Performance of water Points for Agro-pastoral project

In a study conducted by Okello (2021), the focus was on M&E data management and performance of projects. The study focussed on infrastructure projects. An examination of empirical studies, theories and models was done. The study builds on conceptual and theoretical underpinning. Through the critical review of literature, it emerged that M&E data management and performance of project are positively and significantly linked with each other. Furthermore, the study recommended two models; logical framework and project performance assessment model and two theories, dynamic capabilities and the change theory as key in providing the nexus between M&E data management and performance of projects. In another study conducted by Mangla, Raut, Narwane and Zhang (2020), the main focus was on data management as a mediator. The focus of the study was on manufacturing small and medium enterprises in India. Information was gathered through questionnaire besides adopting empirical analysis through structural equation modelling. The results were that project knowledge management need the mediating support and reinforcement of big data analytics. It was noted that adopting big data analytics is a significant predictor of performance of projects.

Wang, Göpfert and Stark (2016) did an analysis of data management in collaborative interdisciplinary research projects. The study covered 19 individual projects drawn from various disciplines. It emerged from the study that data management measures in the period largely placed emphasis on establishing a shared conceptual framework. Wruck, Peuker and

Regenbrecht (2014) conducted an analysis of data management strategies for multinational projects. The study presented strategies worked out by national as well as international institutions that target open access for funding research data. It emerged that funding organizations like British Wellcome Trust have come up policies for sharing data. Agyeya (2021) did a study that sought to explore the role of data in monitoring and evaluation activities in projects. The study adopted desk research approach where relevant literature was reviewed on the themes. The review of the literature revolved around data and M&E activities in a typical project organization and the interaction between them. From the review, it was pointed out that data is an integral component of M&E undertaking in any project organization. The paper argues that effectiveness of the M&E function in a project organization relies on accuracy of the collected data as well as the degree of precision of the tools used to gather data.

2.3.4 Utilization of M&E Results and Performance of water Points for Agro-pastoral projects

In a study done by Amina and Ngugi (2022), the focus was on utilization of M&E results and performance. Census was adopted where all the staff were covered. Information was obtained from first hand and second hand sources. Piloting was done to validate the study tools. It emerged that utilizing M&E results has significant nexus with performance of projects. In a study conducted by Gamba, Tukei and Birungi (2020), the focus was on decision factor and the usage of M&E results in implementation of programs. The study focused on Ugandan Malaria Control Program. A survey design was adopted guided by the questionnaire. The sample was drawn from M&E staff. Information gathered was quantitative and the analysis was done descriptive and inferentially. It emerged from analysis that the level of receptiveness and consideration of the information needs are not significantly connected with the utilization of M&E results.

The study done by Winiko, Mbugua and Kyalo (2018) was an appraisal of the role of disseminating M&E results in promoting performance of digital education technology projects using a case of Malawi. The sample was drawn from staff who had been involved in implementation and M&E activities. Proportionate stratified random sampling was adopted to select the sample. From each stratum, a table of random numbers was used to selection of the sample. Both interview guide and the questionnaire were used to gather information. It was shown that disseminating M&E results in has significant effect on project performance. Kabuye and Basheka (2017) focused on public universities in Uganda to appraise how

institutional design and utilization of evaluation results are concerned. Cross-sectional survey involving was adopted where 118 participants formed the sample. Information was gathered through the questionnaire and interview guides. Documentary analysis was used for triangulation of the results. It was shown that procedural rules, evaluation capacity and process have direct and significant implication on utilization of evaluation results.

Matsiliza (2018) conducted an investigation on usage of result based M&E for improvement in performance of small firms. The main focus of the study was on providing justification of why it is necessary to embrace M&E in small firms aimed at bringing about an improvement in performance. The study hypothesized that small firms around the world are constrained when it comes to undertaking of M&E activities a challenge that inhibits their ability to meet the established targets. This was a theoretical study. It emerged from the reviewed literature that small firms should synchronise their M&E activities, processes and systems in business units and identify possible errors which can be important in enhancing performance. Wepukhulu (2017) did an analysis whose main focus on utilization of results from M&E and its determinants in Kenyan Counties. Descriptive survey design was adopted targeting 370 participants that were selected through purposive method. The study questionnaire was pilot tested so as to gauge its validity and reliability level. The analysis was done supported by percentages, means as well as regression model. It emerged from the analyzed results that utilization of results from M&E is important in informing decision making on the progress of the project.

2.3.5 Monitoring and Evaluation Practices and Performance of water Points for Agro-pastoral project

Kissi, Agyekum, Baiden, Tannor, Asamoah and Andam (2019) conducted a study on M&E practice with reference to success of construction projects in the context of Ghana. The information of the study was obtained from primary sources guided by questionnaire that had been structured. The analysis of the findings was done by partial least square structural equation modelling (PLS-SEM). It emerged from the analyzed results that M&E practices and success of construction activities were significantly linked with each other. The study done by Murorunkwere and Munene (2022) was an assessment of M&E practices and performance of projects in Rwanda. Descriptive research design was adopted and Slovin's formula was instrumental in determination of the sample. Both qualitative and quantitative methods played a role in analysis. The variables were M&E planning, M&E budgeting and

the degree of involvement of M&E experts. It was shown that all these proxies of M&E practices played a critical role as far as project performance is concerned.

Kalung'e (2021) did a study whose focus was on M&E practices and performance of Kenya Youth Employment and Opportunities. The variables covered include the need to select M&E measurement techniques and tools, M&E capacity building, M&E planning and M&E reporting. Both the theory of change and theory of constraint provided anchorage to the inquiry. Census was embraced and information was obtained from first hand sources. The results were that M&E practices are critical predictors of project performance. Olala and Nyonje (2020) conducted an inquiry with focus on M&E practices and performance of project. Desk research was the methodology that was conducted in this study which entailed review of literature and information from articles. It was observed that in as much as M&E practices significantly predicted project performance, the study pointed out some gaps that were vivid in methodologies that might have affected the outcomes.

Wambua (2019) conducted an inquiry with emphasis on M&E practices and their nexus with performance of education projects in Makueni. The variables that were covered in this study include training of the M&E employees, involvement of stakeholders, M&E planning and the adoption of baseline surveys. Descriptive survey was embraced and stratified random sampling helped in selection of the sample. Information was qualitative and quantitative in nature. It was shown that M&E practices and performance of projects is significant connected. The study observed that project teams at the sub-county level had undergone training n M&E and took part in baseline surveys through public participation. Kihuha (2018) conducted a study whose main focus was on M&E practices and the nexus with performance of projects by the United Nations Environment Programme in Kenyan context. The variables adopted in this study include M&E planning, technical expertise, and stakeholder and management involvement. The respondents included project managers, support staff and M&E staff. Means and percentages as well as regression models were embraced during the processing of the results. It emerged that M&E practice is a significant predictor of performance of the projects.

2.4 Summary of Empirical Literature and Research Gaps

Table 2.1 is a summary of literature and the gaps

Table 2.1: Summary of Empirical Literature and Research Gaps

Author & year	Study	Finding	Knowledge gap	Focus of present study
Murorunkwere and Munene (2022)	an assessment of M&E practices and performance of projects in Rwanda	M&E planning, M&E budgeting and the degree of involvement of M&E experts played a critical role as far as project performance is concerned.	The study was done in Rwanda	The present study was done in Kenya
Amolo, Rambo and Wafula (2021	M&E capacity building and performance of projects involving construction of roads in Kisumu	the M&E capacity building has significant implication on performance of the projects involving construction of roads	projects involving construction of roads were studied	water Points for Agro-pastoral project in Somalia was the focus
Gamba, Tukei and Birungi (2020),	decision factor and the usage of M&E results in implementation of programs	level of receptiveness and consideration of the information needs are not significantly connected with the utilization of M&E results.	implementation of programs was the dependent variable	Performance of water Points for Agro-pastoral project was the dependent variable
Mangla, Raut, Narwane and & Zhang (2020	data analytics as a mediator as far as performance of projects is concerned	project knowledge management need the mediating support and reinforcement of big data analytics	data analytics was covered	Data management was the variable of concern
Odhiambo, Wakibia and Sakwa (2020)	M&E planning and the implication on implementation of projects aimed at alleviating poverty in Coastal parts of Kenya	strong and direct nexus was registered through correlation analysis between M&E planning and implementation of project	implementation of projects was the dependent variable	Performance of water Points for Agro-pastoral project was the dependent variable
Morkel and Ramasobama (2017)	M&E capacity initiatives in Africa	There is need for more empirical literature for building a clear comprehension of the conditions needed in evaluation capacity building within the context of Africa.	The study was supported by desk review	The present study was an empirical investigation

Source: Researcher (2022)

2.5 Conceptual Framework

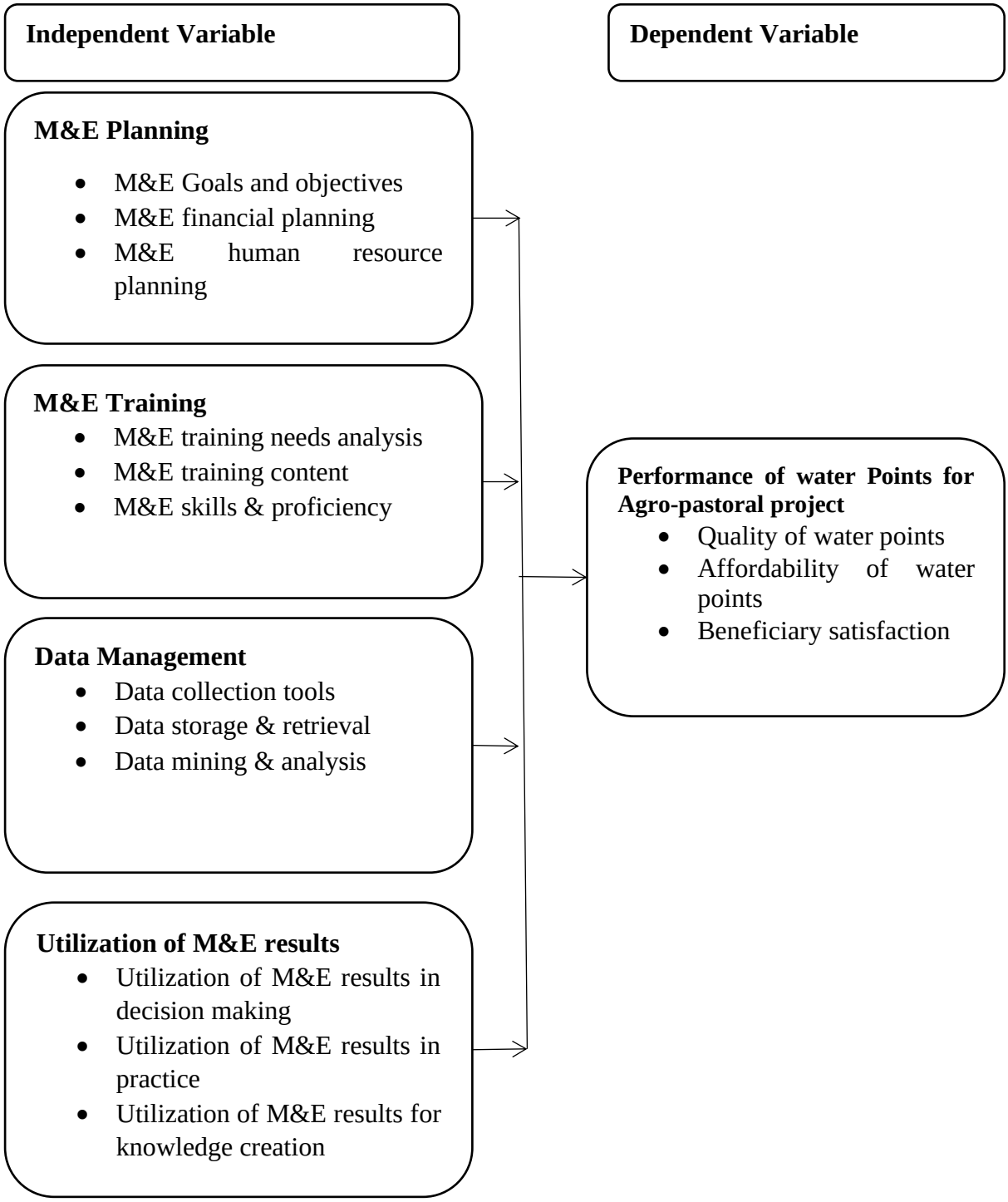

Figure 1: Conceptual Framework

Source: Researcher (2022)

2.6 Research Hypothesis

$H_0$1: M&E planning has no statistically significant influence on performance of water Points for Agro-pastoral project in Somalia.

$H_0$2: M&E training has no statistically significant influence on performance of water Points for Agro-pastoral project in Somalia.

$H_0$3: data management has no statistically significant influence on performance of water Points for Agro-pastoral project in Somalia.

$H_0$4: utilization of M&E results has no statistically significant influence on performance of water Points for Agro-pastoral project in Somalia.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter is set out to document the methodologies in terms of research design, population and means that were used in sampling. It also outlines the data gathering activities and the associated procedures as well as the piloting, determination of validity and reliability. The methods of processing data in terms of analysis and the presentation of the results are also outlined.

3.2 Research Design

Descriptive survey and correlational research designs were adopted to meet the formulated objectives of the study. Research design is a structure that guides the gathering and analysis of information in an inquiry (Harris, Holyfield, Jones, Ellis & Neal, 2019). The design made it possible to provide answers to questions revolving around what, why, when and how in respect to a given issue. Descriptive design is critical in description of the data and some attributes with regard to the study population (Liamputtong, 2019). This design is useful in describing a number of facets of a given phenomenon and the attributes of the sample population. This design helped in gathering of data for providing greater depth of responses leading to elaborate and better comprehension of the phenomenon under consideration by the study. This design helped the study to probe specific issues of the variables of the study by gathering information on a set of parameters that are known beforehand. Correlational design was useful in testing the hypotheses.

3.3 Population of the Study

Population is the whole grouping of individuals, events as well as objects that have same attributes that can easily be seen (Strijker, Bosworth & Bouter, 2020). The study targeted 87 staff from the M&E department drawn from 2 water Points for Agro-pastoral project in Somalia (appendix V). These staff is broken down into M&E managers, M&E learning officers, data analysts, research assistants, steering Committee, project implementation unit and contractors as shown in Table 3.1.

Table 3.1: Population of the Study

Category	Population
M&E managers	6
M&E learning officers	8
Data analysts	20
Research assistants	21
Steering Committee	15
Project Implementation Unit	10
Contactors	7
Total	**87**

Source: ReliefWeb (2022)

3.4 Sample size and Sampling Technique

The subsequent sections detail the sampling techniques and the sample size of the study.

3.4.1 Sampling Technique

Sampling is the process of gathering information in respect to the entire population through an examination of only a proportion of it (Dźwigoł, 2019). Stratified random sampling was used as demonstrated in Table 3.2.

Table 3.2: Sampling Technique

Category	Population	Sample Proportion	Sample size
M&E managers	6	6/87*100%=6.9%	6.9%*71=5
M&E learning officers	8	8/87*100%=9.1%	17.2%*71=7
Data analysts	20	20/87*100%=23%	40.2%*71=17
Research assistants	21	21/87*100%=24.1%	24.1%*71=17
Steering Committee	15	15/87*100%=24.1%	15%*71=11
Project Implementation Unit	10	10/87*100%=11.5%	11.5%*71=8
Contactors	7	7/87*100%=8%	8%*71=6
Total	**87**		**71**

Source: ReliefWeb (2022)

3.4.2 Sample Size

Sample size is a collection of items which are selected from the larger population for the purpose of generalizing the findings of the inquiry (Eden & Nielsen, 2020). The study used the formula by Yamane (1967) to determine the sample size as demonstrated below:

$$\mathbf{n = N / (1 + Ne^2)}$$

n = is the desired sample size

N = is the target population

e = is the acceptable margin of error estimated at 0.05 (at 95% confidence interval

Therefore, sample size (n) = 87÷ (1+87 (0.0025))

= 87÷ (1+02175)

= 87÷1.2175

n= 71 respondents

3.5 Data Collection Instrument

This study gathered primary data with the aid of the questionnaire. Marvasti, (2018) defines a questionnaire as a document that comprises of a number of items in form of questions which have a definite sequence. The justification of using the questionnaire was that it had the possibility to gather information from a large number of respondents over a limited time. Furthermore, the study was motivated to use the questionnaire due to their flexibility in reaching specific respondents. It was also cheap and quick to administer the questionnaire to participants of the study. The questionnaire was structured and presented in sections covering the general information in section A, performance of water points for agro-pastoral project in section B and monitoring and evaluation in section C which is include M&E planning, M&E training, data management, and utilization of M&E results. a 5-point Likert scale of 1-5, where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree will be used in design of the questionnaire.

3.5.1 Pilot testing of Research Instruments

A pilot study is a rehearsal and replica of the main inquiry which is to be conducted. Its essence is to uncover possible weaknesses in the techniques of survey and the questionnaire (Thanem & Knights, 2019). As pointed out by Privitera and Ahlgrim-Delzell (2018), a pilot study can be conducted using 10% projected sample for the overall parent inquiry. Thus, 10% of the study population representing 7 respondents were purposively selected and included in the pilot study but the same were excluded from the final inquiry to avoid possible biasness. This pilot testing provided an opportunity where the researcher could detect and correct any possible concern with the tool for gathering information from the participants. These concerns included the questions that were not clear to respondents or those that were ambiguous or those that respondents may not be comfortable with.

3.5.2 Validity of the Research Instrument

Validity is the indication of the extent which a test instrument measure an issue or aspect that it is designed to indicate (Rose et al., 2019). This study tested for face, content and constructs validities. Face validity built on previous inquiries that had provided an indication that the

study tool is reliable. Content validity was tested by designing the study questionnaire guided by the variables and their established indicators in the conceptual framework. For construct validity, the questions on the questionnaire were restricted to how the study variables had been conceptualized.

3.5.3 Reliability of the Research Instrument

This refers to the extent which the study tool has neutrality in its implication characterised by a high level of consistency across varied occasions of its application (Ghauri, Grønhaug & Strange, 2020). The study adopted test-rest method in determining the reliability of the questionnaire. In this regard, the questionnaire was administered to the pilot group two times in a week. In determining the correlation between information in the two intervals, correlation coefficient values were computed and appropriately interpreted. The rule of thumb was that correlation coefficient in the range $\geq 0.8 < 0.9$ imply good reliability.

3.6 Data Collection Procedure

The researcher sought for consent of the managers of the water point projects in Somalia before the actual inquiry. A research permit from the Ministry of Education in Somalia was also sought in advance before proceeding to the field to gather information. The researcher administered the questionnaire to participants by self, as a way of increasing the response rate. At the point of administering the questionnaire to participants, their contact details were recorded for making a follow up.

3.7 Data Analysis

It is the processing of the information that has been gathered from the field to drawn relevant inferences (Faulkner & Faulkner, 2018). The information obtained from the field was sorted and edited then keyed into excel for basic formatting to ensure there was consistency. From excel, the data was exported to SPSS tool version 24 where percentages and means were computed to provide a description of the data. In order to draw inferences and test the formulated hypotheses of the study, the following multiple regression model was adopted:

$$\mathbf{Y= \beta_0+ \beta_1X_1+\beta_2X_2+\beta_3X_3 +\beta_4X_4 + \varepsilon}$$

Where Y= performance of water Points for Agro-pastoral projects

B_0 = Constant; β_1, β_2, β_3 and β_4 are Coefficients; e = error term; X_1= M&E planning; X_2= M&E training; X_3= data management; X_4= utilization of M&E results

The findings will be presented through tables

3.8 Ethical Considerations

The researcher sought for all relevant authorities including a letter of transmittal from the UON and a research permit from the Ministry of Livestock, Forestry and range in Somalia. Participation in the study was on voluntary basis as no participant was forced to do so without informed consent. Participants were required to disclose their names on the questionnaire and those participants who were not comfortable to take part in the inquiry were not forced to do so. APA style of referencing was embraced. This was a great step towards managing plagiarism.

3.9 Operationalization of the Variables

Table 3.3 is an overview of how the study variables were operationalized:

Table 3.3: Operationalization of the Variables

Type of variable	Indicators	Scale of measurement	Level of measurement	Data collection tool	Data analysis tool
M&E Planning	M&E Goals and objectives M&E financial planning M&E human resource planning	Ordinal	Interval	Questionnaire, section C	Percentages Means Regression analysis
M&E Training	M&E training needs analysis M&E training content M&E skills & proficiency	Ordinal	Interval	Questionnaire, section C	Percentages Means Regression analysis
Data Management	Data collection tools Data storage & retrieval Data mining & analysis	Ordinal	Interval	Questionnaire, section C	Percentages Means Regression analysis
Utilization of M&E results	Utilization of M&E results in decision making Utilization of M&E results in practice Utilization of M&E results for knowledge creation	Ordinal	Interval	Questionnaire, section C	Percentages Means Regression analysis
Performance of water Points for Agro-pastoral project	Quality of water points Access to water points Availability of water points	Ordinal	Interval	Questionnaire, section B	Percentages Means

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The focus of this chapter is on outlining the results of analysis as informed by the descriptive and inferential statistics.

4.2 Questionnaire Return Rate

A total of 71 questionnaires were administered to staff working in the M&E department from 2 water Points for Agro-pastoral project in Somalia. However, 53 of them were completely filled in and recollected which was equivalent to a return rate of 74.6% consistent with Babbie (2010).

4.2 General Information

The analysis of gender, education and years of experience of the respondents is done in the subsequent sections.

4.2.1 Gender Distribution

Table 4.1 is a summary of gender distribution

Table 4.1: Gender Distribution

	Frequency	Percentage
Male	33	62.3%
Female	20	37.7%
Total	**53**	**100.0**

Source: Field Data (2022)

Table 4.1 indicate that 62.7% were male while 37.7% were female. This implies that more male than female are working in the M&E departments in the water Points for Agro-pastoral project in Somalia.

4.2.2 Level of Education

The findings on level of education were determined and shown in Table 4.2.

Table 4.2: Level of Education

	Frequency	Percentage
Diploma	17	32.1%
Degree	27	50.9%
Masters	9	17.0%
Total	**53**	**100.0**

Source: Field Data (2022)

It was shown that while 50.9% of the respondents had degrees, 17% had masters. This means that respondents shared informed responses on M&E that was central in the present study.

4.2.3 Years of Experience

Consider Table 4.3.

Table 4.3: Years of Experience

	Frequency	Percentage
Less than 5 years	7	13.2%
6-10 years	11	20.8%
11-15 years	19	35.8%
16-20 years	13	24.5%
Over 20 years	3	5.7%
Total	**53**	**100.0**

Source: Field Data (2022)

Table 4.3 shows that while 35.8% of the respondents had worked for 11-15 years, 5.7% had worked for over 20 years. Thus, the respondents had been involved in carrying out M&E related duties for a long period of time meaning that they had the right information to share on the same as sought by the study.

4.3 Descriptive Statistics

The subsequent sections detail the descriptive statistics findings guided by means and standard deviations.

4.3.1 Performance of Water Points for Agro-Pastoral Project

Table 4.4 is a breakdown of the findings on project performance.

Table 4.4: Performance of Water Points for Agro-Pastoral Project

	SD		D		N		A		SA		Mean	Std. Dev
	f	%	f	%	f	%	f	%	f	%		
The beneficiaries of this project enjoy quality water points	0	0.0%	0	0.0%	4	11.3%	24	73.6%	5	15.1%	4.04	0.517
The water points of this project are affordable	0	0.0%	1	3.8%	11	34%	19	58.5%	1	3.8%	3.62	0.627
Affordability has increased the number of beneficiaries of the water points of this project	0	0.0%	1	13.2%	5	7.5%	24	64.2%	3	15.1%	3.81	0.856
The beneficiaries are satisfied with the quality of water points of this project	0	0.0%	1	1.9%	5	15.1%	24	73.6%	3	9.4%	3.91	0.564
Average	0	**0.0%**	2	**4.7%**	6	**17.0%**	22	**67.5%**	4	**10.9%**	**3.84**	**0.641**

Source: Field Data (2022)

It was shown that 88.7% of the participants were in agreement (M=4.04, SD=0.517) that the beneficiaries of this project enjoyed quality water points. At the same time, 83.0% of the participants were in agreement (M=3.9, SD=0.564) that the beneficiaries were satisfied with the quality of water points of that project. It was observed by 79.3% of the participants (M=3.81, SD= 0.856) that affordability had increased the number of beneficiaries of the water points of that project while 62.3% were in agreement (M=3.62, SD=0.627) that the water points of that project were affordable. This implies that the studied water points were performing well in terms of quality, satisfaction of beneficiaries and the involved costs of access (affordability).

4.3.2 Monitoring and Evaluation Practices

Four M&E practices were identified revolving around planning, training, data management and utilization of the results and the findings of means and standard deviations presented in the sections below. Table 4.4 is a breakdown of the findings on M&E planning.

Table 4.5: M&E Planning

Statements on M&E Planning	SD		D		N		A		SA		Mean	Std. Dev
	f	%	f	%	f	%	f	%	f	%		
This project is guided by clear M&E goals	0	0.0%	1	1.9%	10	30.2%	18	54.7%	4	13.2%	3.79	0.689
The project has well specified M&E objectives	1	1.9%	1	1.9%	12	35.8%	16	49.1%	4	11.3%	3.66	0.783
M&E financial planning is done through budgeting	0	0.0%	4	13.2%	5	15.1%	21	62.3%	3	9.4%	3.68	0.827
M&E human resource planning determines the required staff	0	0.0%	0	0.0%	7	20.8%	17	50.9%	9	28.3%	4.08	0.703
M&E human resource planning determines required M&E skills	0	0.0%	5	15.1%	0	0.0%	23	69.8%	5	15.1%	3.85	0.864
Average	0	**0.4**%	2	**6.4**%	7	**20.4**%	19	**57.4**%	5	**15.5**%	**3.81**	**0.773**

Source: Field Data (2022)

Table 4.5 indicate that while 84.9% of participants were in agreement (M=3.85, SD=0.864 that M&E human resource planning determined the required M&E skills, 79.2% were in agreement (M=4.08, SD=0.703) that M&E human resource planning determined the required staff. The findings were that while 71.7% of the participants agreed (M=3.68, SD=0.827) that M&E financial planning was done through budgeting, 67.90% were in agreement (M=3.79, SD=0.689) that the project was guided by clear M&E goals and 60.4% shared (M=3.66,

SD=0.783) that the project had well specified M&E objectives. The overall finding from Table 4.5 above is that 72.90% of participants were in agreement (M=3.81, SD=0.773) that M&E planning was conducted in their project. Thus, thus this M&E planning, the project managers of the studied water point projects were in position to plan and establish the quality indicators and standards of water that in turn transpired into beneficiary satisfaction as set out in the indicators of project performance in the conceptual framework of the study.

Table 4.6 is an overview of the results on M&E training.

Table 4. 6: M&E Training

Statements on M&E Training	**SD**		**D**		**N**		**A**		**SA**		**Mean**	**Std. Dev**
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**		
M&E training needs analysis is conducted in this project to determine future training opportunities	1	1.9%	5	15.1%	6	17%	14	41.5%	8	24.5%	3.72	0.663
M&E training needs analysis determines the staff that require training	0	0.0%	4	13.2%	4	13.2%	20	60.4%	4	13.2%	3.74	0.858
The M&E training content of this project is relevant	0	0.0%	0	0.0%	10	30.2%	19	56.6%	4	13.2%	3.83	0.643
M&E training is used to enhance the skills of staff	0	0.0%	6	17%	3	9.4%	22	66%	2	7.5%	3.64	0.857
M&E training is used to boost the proficiency of staff	0	0.0%	4	13.2%	4	11.3%	20	60.4%	5	15.1%	3.77	0.869
Average	0	**0.4%**	4	**11.7%**	5	**16.2%**	19	**57.0%**	5	**14.7%**	**3.74**	**0.778**

Source: Field Data (2022)

Table 4.6 indicate that while 75.5% (M=3.77, SD= 0.869) of participants shared that M&E training was used to boost the proficiency of staff, 73.6% (M=3.74, SD=0.858) shared that M&E training needs analysis determined the staff that require training. It was shown that while 73.5% (M=3.64, SD=0.857) argued that M&E training was used to enhance the skills of staff, 69.8% (M=3.83, SD=0.643) said that M&E training content of that project was relevant and 66% (M=3.72, SD=0.663) agreed that M&E training needs analysis was conducted in that project to determine future training opportunities. On overall therefore, 71.7% (M=3.74, SD= 0.778) were in agreement that M&E training was conducted in their project.

Table 4.7: Data Management

Statements on Data Management	SD		D		N		A		SA		Mean	Std. Dev
	f	%	f	%	f	%	f	%	f	%		
This project has invested in modern data collection tools	0	0.0%	2	5.7%	5	15.1%	26	79.2%	0	0.0%	3.74	0.560
The project has databases used to store huge volume of data gathered from the field	1	3.8%	3	9.4%	2	5.7%	21	64.2%	6	17%	3.81	0.962
It is easy to retrieve data in this project	1	1.9%	4	13.2%	3	9.4%	19	58.5%	6	17%	3.75	0.959
Different data is mined as required by user needs of this project	0	0.0%	1	3.8%	1	1.9%	27	81.1%	4	13.2%	4.04	0.553
The data gathered from the field is analyzed to generate M&E reports	0	0.0%	6	17%	3	9.4%	23	69.8%	1	3.8%	3.60	0.817
Average	0	**1.1**%	3	**9.8**%	3	**8.3**%	23	**70.6**%	3	**10.2**%	**3.79**	**0.770**

Source: Field Data (2022)

Table 4.7 shows that 94.3% (M=4.04, SD=0.553) of the participants shared that different data was mined as required by user needs of that project, 81.2% (M=3.81, SD=0.962) said that the project had databases used to store huge volume of data gathered from the field and 79.2% (M=3.74, SD=0.560) noted that the project had invested in modern data collection tools. The results further indicated that while 75.5% (M=3.75, SD=0.959) shared that it was easy to retrieve data in that project, 73.6% (M=3.60, SD=0.817) noted that the data gathered from the field was analyzed to generate M&E reports. On overall, it can be observed that 80.8% (M=3.79, SD=0.770) were in agreement with the fact that data management was evident in their project.

Table 4.8: Utilization of M&E results

Statements on Utilization of M&E results	SD		D		N		A		SA		Mean	Std. Dev
	f	%	f	%	f	%	f	%	f	%		
The M&E results are utilized in making decisions in this project	0	0.0%	2	5.7%	5	15.1%	24	73.6%	2	5.7%	3.79	0.631
M&E results guide the practices in this project	0	0.0%	6	18.9%	5	15.1%	19	58.5%	2	7.5%	3.55	0.889
M&E results guides the daily operations in this project	0	0.0%	0	0.0%	4	11.3%	23	69.8%	6	18.9%	4.08	0.549
M&E results are used to create new knowledge in this project	0	0.0%	3	9.4%	7	20.8%	16	49.1%	7	20.8%	3.81	0.878
Average	0	**0.0%**	3	**8.5%**	5	**15.6%**	21	**62.8%**	4	**13.2%**	**3.807**	**0.737**

Source: Field Data (2022)

Evidence from Table 4.8 show that while 88.7% (M=4.08, SD=0.549) said that M&E results guided the daily operations in that project, 79.3% (M=3.79, SD=0.631) observed that there was utilization of M&E results in making decisions in that project. Besides, while 69.9% (M=3.81, SD=0.878) shared that M&E results are used to create new knowledge in that project, 66% (M=3.55, SD=0.889) noted that M&E results guided the practices in that project. The implication of Table 4.8 is that on overall, 76% (M=3.807, SD=0.737) were in agreement that there was utilization of M&E results in their project.

4.4 Regression Results and Hypotheses Testing

Regression analysis played an instrumental role in testing of the formulated hypotheses. Table 4.9 is a breakdown of the model summary.

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.915[a]	.837	.823	.38241

Source: Field Data (2022)

On overall, 82.3% change in performance of water Points for Agro-pastoral project in Somalia is explained by M&E practices (Adj. R^2=0.823). This means there are still other unexplored factors with an effect on ability of these projects to performance which future studies need to focus on. Table 4.10 is the ANOVA results.

Table 4.10: ANOVA Findings

	Sum of Squares	df	Mean Square	F	Sig.
Regression	35.962	4	8.990	61.477	.000[b]
Residual	7.020	48	.146		
Total	**42.981**	**52**			

Source: Field Data (2022)

Table 4.10 generally predicts that the overall model was significant (F=61.477, p<0.05). The coefficients and significance are shown in Table 4.11.

Table 4.11: Coefficients and Significance

	Unstandardized Coefficients		Standardized Coefficients		
	β	Std. Error	Beta	t	Sig.
(Constant)	3.109	1.394		2.230	.030
M&E Planning	.223	.105	.289	2.122	.039
M&E Training	.242	.076	.053	3.184	.019
Data Management	.228	.096	.167	2.375	.014
Utilization of M&E Results	.428	.075	.597	5.700	.000

Source: Field Data (2022)

The resulted fitted model becomes:

$$Y= 3.109+ .223X_1+.242X_2+.228X_3+.428X_4$$

Where Y= performance of water Points for Agro-pastoral projects

X_1= M&E planning

X_2= M&E training

X_3= data management

X_4= utilization of M&E results

Table 4.11 shows that utilization of M&E results (β=0.428) had the greatest effect on project performance then M&E Training (β=0.242), data management (β=0.228) and lastly M&E planning (β=0.223).

4.4.1 Hypotheses Testing

$H_0$1: M&E planning has no significant influence on performance of water Points for Agro-pastoral project in Somalia.

Table 4.11 gives the key result on M&E planning as p=.039 which is <0.05. Hence, $H_0$1was rejected.

$H_0$2: M&E training has no significant influence on performance of water Points for Agro-pastoral project in Somalia.

From Table 4.11, the p-value of M&E training was p=0.019 and thus p<0.05. Thus, the study rejects $H_0$2.

$H_0$3: data management has no significant influence performance of water Points for Agro-pastoral project in Somalia.

As per Table 4.11, the p-value on data management was p=0.014 which is p<0.05. Hence, $H_0$3 was rejected.

$H_0$4: utilization of M&E results has no significant influence on performance of water Points for Agro-pastoral project in Somalia.

Basing on Table 4.11, utilization of M&E results had p-value as p=0.000 which is <0.05. Hence, the study rejects $H_0$4.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The summary of the analyzed findings and discussion are presented in this chapter. The conclusion and recommendations as well as suggestions that require further studies are also highlighted.

5.2 Summary of the Findings

5.2.1 M&E Planning

While 84.9% of participants were in agreement (M=3.85, SD=0.864 that M&E human resource planning determined the required M&E skills, 79.2% were in agreement (M=4.08, SD=0.703) that M&E human resource planning determined the required staff. The findings were that while 71.7% of the participants agreed (M=3.68, SD=0.827) that M&E financial planning was done through budgeting, 67.90% were in agreement (M=3.79, SD=0.689) that the project was guided by clear M&E goals and 60.4% shared (M=3.66, SD=0.783) that the project had well specified M&E objectives. The overall finding is that 72.90% of participants were in agreement (M=3.81, SD=0.773) that M&E planning was conducted in their project. Based on regression analysis, M&E planning had p=.039 which is <0.05. Hence, $H_0$1was rejected.

5.2.2 M&E Training

It was shown that while 75.5% (M=3.77, SD=0.869) of participants shared that M&E training was used to boost the proficiency of staff, 73.6% (M=3.74, SD=0.858) shared that M&E training needs analysis determined the staff that require training. It was shown that while 73.5% (M=3.64, SD=0.857) argued that M&E training was used to enhance the skills of staff, 69.8% (M=3.83, SD=0.643) said that M&E training content of that project was relevant and 66% (M=3.72, SD=0.663) agreed that M&E training needs analysis was conducted in that project to determine future training opportunities. Therefore, 71.7% (M=3.74, SD= 0.778) were in agreement that M&E training was conducted in their project. From regression analysis, the p-value of M&E training was p=0.019 and thus p<0.05. Thus, the study rejects $H_0$2.

5.2.3 Data Management

It was noted that 94.3% (M=4.04, SD=0.553) of the participants shared that different data was mined as required by user needs of that project, 81.2% (M=3.81, SD=0.962) said that the project had databases used to store huge volume of data gathered from the field and 79.2% (M=3.74, SD=0.560) noted that the project had invested in modern data collection tools. The results further indicated that while 75.5% (M=3.75, SD=0.959) shared that it was easy to retrieve data in that project, 73.6% (M=3.60, SD=0.817) noted that the data gathered from the field was analyzed to generate M&E reports. Thus, it can be observed that 80.8% (M=3.79, SD=0.770) were in agreement with the fact that data management was evident in their project. As per regression analysis, the p-value on data management was p=0.014 which is $p<0.05$. Hence, $H_0 3$ was rejected.

5.2.4 Utilization of M&E results

Evidence show that while 88.7% (M=4.08, SD=0.549) said that M&E results guided the daily operations in that project, 79.3% (M=3.79, SD=0.631) observed that there was utilization of M&E results in making decisions in that project. Besides, while 69.9% (M=3.81, SD=0.878) shared that M&E results are used to create new knowledge in that project, 66% (M=3.55, SD=0.889) noted that M&E results guided the practices in that project. On overall, 76% (M=3.807, SD=0.737) were in agreement that there was utilization of M&E results in their project. Basing on regression analysis, utilization of M&E results had p-value as p=0.000 which is <0.05. Hence, the study rejects $H_0 4$.

5.3 Discussion

5.3.1 M&E Planning

Based on regression analysis, M&E planning had p=.039 which is <0.05. Hence, $H_0 1$was rejected. Thus, M&E planning is an important practice that contributes towards performance of projects. The finding concurs with Odhiambo, Wakibia and Sakwa (2020) who registered a strong and direct nexus between M&E planning and implementation of project. Byegon, Gakuu and Kidombo (2022) did an analysis whose focus was on planning for M&E and its predictor role in performance of health projects in Kibera where the results were that planning for M&E is a significant predictor of performance of health projects. Mugo, Keiyoro, Iribe and Rambo (2016) placed focus on M&E planning as far as sustainability of agricultural projects were concerned and it observed from the results that M&E planning is a strong and positive predictor of sustainability of agriculture projects. The focus of the study

by Ngigi (2020) was on M&E planning as one of the proxies of M&E and its implication on implementation of projects by Acted Kenya and it emerged from the results that M&E planning had significant effect on project implementation. Participants observed that planning strategies were implemented by Acted Kenya on time. The overall finding is that 72.90% of participants were in agreement (M=3.81, SD=0.773) that M&E planning was conducted in their project. The finding is consistent with Ngigi (2020) who observed that planning strategies were implemented by Acted Kenya on time.

5.3.2 M&E Training

From regression analysis, the p-value of M&E training was $p=0.019$ and thus $p<0.05$. Thus, the study rejects H02 implying that M&E training significantly enhances project performance. This finding agree with a number of empirical studies Amolo, Rambo and Wafula (2021) whose focus was on M&E capacity building and performance of projects involving construction of roads in Kisumu. It emerged that M&E capacity building has significant implication on performance of the projects involving construction of roads. In a study done by Ooko, Rambo and Osogo (2018), it emerged from analysis that technical support contributed towards an increase in knowledge with regard to M&E system to a moderate degree. Furthermore, capacity building in M&E was seen to have contributed towards an increase in access on health services. An investigation of M&E on performance of projects at African Virtual University in Kenya was conducted by Phiri (2015). In this study, one of the objective variables was M&E training besides M&E planning, baseline surveys. It emerged that M&E activities like training significantly contribute to project performance. Kithinji (2019) conducted a study on evaluation capacity building and its implication on improvement of M&E among NGOs in Meru. It emerged that most NGOs in Meru were carrying out a number of unstructured activities aimed at building evaluation capacity and these actions had significant implication on the M&E function. Kithinji (2015) shared that evaluation capacity undertakings ranging from professional development and M&E support had a significant implication on the utilization of the results.

5.3.3 Data Management

As per regression analysis, the p-value on data management was $p=0.014$ which is $p<0.05$. Hence, H_03 was rejected. The result is consistent with Okello (2021), the focus was on M&E data management and performance of projects. Through the critical review of literature, it emerged that M&E data management and performance of project are significantly linked. Mangla, Raut, Narwane and Zhang (2020) did a study whose main focus was on data

management as a mediator. It was noted that adopting big data analytics is a significant predictor of performance of projects. Agyeya (2021) did a study that sought to explore the role of data in monitoring and evaluation activities in projects. From the review, it was pointed out that data is an integral component of M&E undertaking in any project organization. The paper argues that effectiveness of the M&E function in a project organization relies on accuracy of the collected data as well as the degree of precision of the tools used to gather data.

5.3.4 Utilization of M&E results

Basing on regression analysis, utilization of M&E results had p-value as p=0.000 which is <0.05. Hence, the study rejects $H_0$4 and deduced that utilization of M&E results significantly predicts project performance. The finding agrees with Amina and Ngugi (2022) who conducted a study on utilization of M&E results and performance. It emerged that utilizing M&E results has significant nexus with performance of projects. The study done by Winiko, Mbugua and Kyalo (2018) observed that disseminating M&E results in has significant effect on project performance. . Wepukhulu (2017) did an analysis whose main focus on utilization of results from M&E and its determinants in Kenyan Counties. It emerged from the analyzed results that utilization of results from M&E is important in informing decision making on the progress of the project

5.4 Conclusion

5.4.1 M&E Planning

Based on regression analysis, $H_0$1was rejected and hence M&E planning was found to be a significant predictor of project performance. There was M&E planning in water Points for Agro-pastoral project in Somalia. M&E human resource planning determined the required M&E skills. M&E human resource planning determined the required staff. M&E financial planning was done through budgeting. The project was guided by clear M&E goals.

5.4.2 M&E Training

From regression analysis, the study rejects $H_0$2 and concludes that M&E training plays an instrumental role in project performance. M&E training is conducted in the water Points for Agro-pastoral project in Somalia. This helped to boost the proficiency of staff. M&E training needs analysis determined the staffs that require training. M&E training was used to enhance the skills of staff. M&E training content of that project was relevant.

5.4.3 Data Management

As per regression analysis, $H_0$3 was rejected and a conclusion was reached that data management is a critical practice of M&E that drives project performance. Different data was mined as required by user needs of that project. The project had databases used to store huge volume of data gathered from the field. The project had invested in modern data collection tools. It was easy to retrieve data in that project. Data gathered from the field was analyzed to generate M&E reports.

5.4.4 Utilization of M&E results

Basing on regression analysis, the study rejects $H_0$4 reach a conclusion that utilization of M&E results is key driver of project performance. There was utilization of M&E results in most water Points for Agro-pastoral project in Somalia. M&E results guided the daily operations in that project. There was utilization of M&E results in making decisions in that project. M&E results are used to create new knowledge in that project.

5.5 Recommendations for Management and Policy

i. The project managers in the water Points for Agro-pastoral project in Somalia should take a participatory approach in M&E planning where all concerned stakeholders need to be actively involved in the process
ii. The M&E managers of the water Points for Agro-pastoral project in Somalia should come up with clear budgets, goals and objectives of their projects that are realistic
iii. The human resource managers working in water Points for Agro-pastoral project in Somalia should provide regular training to project staff to equip them with relevant skills
iv. The project managers working in water Points for Agro-pastoral project in Somalia should establish robust data management systems that can support M&E activities
v. The reported M&E results should be available for use among different stakeholders of water Points for Agro-pastoral project in Somalia
vi. The management of water Points for Agro-pastoral project in Somalia should actively follow up and implement relevant suggestions and recommendations raised by M&E reports and results

5.6 Suggestions for Further Research

i. Future research should focus on establishing other factors aside from M&E practices that have an effect on performance of water Points for Agro-pastoral project in Somalia

ii. Future studies should focus on other variables aside from project performance for instance sustainability issues

iii. Other types of projects like infrastructure aside from water Points for Agro-pastoral project in Somalia need to be of focus

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APPENDICES

Appendix I: Letter of Transmittal

Date: …….

Dear Respondent,

I am a student of the University of Nairobi currently undertaking a research study titled: MONITORING AND EVALUATION PRACTICES AND PERFORMANCE OF WATER POINTS FOR AGRO-PASTORAL PROJECT IN SOMALIA. I have chosen Agro-Pastoral Productivity and Resilience Project (Biyoole) particularly Rabaable water point in Nugal region and Awdiinle water point in Bay region as part of the geographical scope of my study. It would be of great value if you could share your wealth of knowledge by completing the attached questionnaire. Your answers will be handled with highest anonymity and confidentiality. Kindly return the completed questionnaire to me.

Regards,

Ahmed Hassan Ali

Appendix II: Questionnaire

SECTION A: GENERAL INFORMATION

1. Kindly information in regard to your gender

Male ( ) Female ( )

2. Kindly indicate your highest level of education

Diploma ( ) Degree ( ) Masters ( ) other ( )

3. Kindly indicate the number of years you have worked with this project

Less than 5 years ( ) 6-10 years ( ) 11-15 years ( ) 16-20 years ( ) Over 20 years ( )

SECTION B: PERFORMANCE OF WATER POINTS FOR AGRO-PASTORAL PROJECT

4. Given below are statements on performance of water points for Agro-pastoral project. Kindly indicate your extent of agreement with these statements. Use the scale of 1-5, where 1=strong disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree

	1	2	3	4	5
The beneficiaries of this project enjoy quality water points					
The water points of this project are affordable					
Affordability has increased the number of beneficiaries of the water points of this project					
The beneficiaries are satisfied with the quality of water points of this project					

SECTION C: MONITORING AND EVALUATION PRACTICES

5. Given below are statements on M&E Planning, M&E Training, Data Management and Utilization of M&E results. Kindly indicate your extent of agreement with these statements. Use the scale of 1-5, where 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree

Statements on M&E Planning	**1**	**2**	**3**	**4**	**5**
This project is guided by clear M&E goals					
The project has well specified M&E objectives					
M&E financial planning is done through budgeting					
M&E human resource planning determines the required staff					
M&E human resource planning determines required M&E skills					
Statements on M&E Training	**1**	**2**	**3**	**4**	**5**
M&E training needs analysis is conducted in this project to determine future training opportunities					
M&E training needs analysis determines the staff that require training					

The M&E training content of this project is relevant					
M&E training is used to enhance the skills of staff					
M&E training is used to boost the proficiency of staff					
Statements on Data Management	**1**	**2**	**3**	**4**	**5**
This project has invested in modern data collection tools					
The project has databases used to store huge volume of data gathered from the field					
It is easy to retrieve data in this project					
Different data is mined as required by user needs of this project					
The data gathered from the field is analyzed to generate M&E reports					
Statements on Utilization of M&E results	**1**	**2**	**3**	**4**	**5**
The M&E results are utilized in making decisions in this project					
M&E results guide the practices in this project					
M&E results guides the daily operations in this project					
M&E results for knowledge creation are used to create new knowledge in this project					

END

THANK YOU

Appendix V: List of Projects

1. Water for Agro-Pastoral Productivity and Resilience Project for Somalia (Biyoole)
2. Rabaable water point in Nugal region.
3. Awdiinle water point in Bay region

Appendix VI: Introduction Letter

UNIVERSITY OF NAIROBI
FACULTY OF BUSINESS AND MANAGEMENT SCIENCES
OFFICE OF THE DEAN

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Our Ref: L50/39196/2021 August 29, 2022

TO WHOM IT MAY CONCERN

RE: INTRODUCTION LETTER: AHMED ALI

The above named is a registered Master of Project Planning and Management Student at the Faculty of Business and Management Sciences, University of Nairobi. He is conducting research on **"Monitoring and Evaluation Practices and Performance of Water Points for Argo- Pastoral Project in Somalia."**

The purpose of this letter is to kindly request you to assist and facilitate the student with necessary data which forms an integral part of the Project.

The information and data required is needed for academic purposes only and will be treated in **Strict-Confidence**.

Your co-operation will be highly appreciated.

PHILIP MUKOLA (MR.)
FOR: ASSOCIATE DEAN,
FACULTY OF BUSINESS AND MANAGEMENT SCIENCES

PMfmi

Appendix VII: Research Permit

JAMHUURIYADDA FEDERALKA SOOMAALIYA
Wasaaradda Xannaanada Xoolaha Dhirta & Daaqa
Xafiiska Agaasimaha Guud

جمهورية الصومال الفيدرالية
وزارة الثروة الحيوانية الغابات والمراع
مكتبت المدير العام

Somali Federal Republic
Ministry of Livestock Forestry and Range
Office of the Director General

Ref: WXD/XAG/ 160 /2022 Date: 04/09/2022

To: Who may Concern

Subject: Research Permission Letter

Dear Ahmed Hassan Ali,

Following your application and regarding the introduction letter from the University of Nairobi to facilitate carry research on **MONITORING AND EVALUATION PRACTICES AND PERFORMANCE OF WATER POINTS FOR ARGO-PASTORAL PROJECT IN SOMALIA.**

The Ministry of Livestock Forestry and Range is very pleased to inform that you are fully authorized to carry out all research related with above mentioned title in Area that the Water for Agro-Pastoral Productivity and Resilience Project (Biyoole) have been implemented thought out the country from the date signed this letter you can go ahead to conduct all your topic research activities on ethical manner.

You're sincerely,

DOWLADDA FEDERAALKA SOOMAALIYA
FEDERAL REPUBLIC OF SOMALIA

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Director General

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