

**MONITORING AND EVALUATION PRACTICES AND  
PERFORMANCE OF AQUACULTURE PROJECTS IN  
KENYA: A CASE OF NATIONAL AQUACULTURE  
RESEARCH DEVELOPMENT AND TRAINING CENTRE IN  
KIRINYAGA COUNTY, KENYA**


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## DECLARATION

This research project is my original work and has not been presented for any academic award in any university.

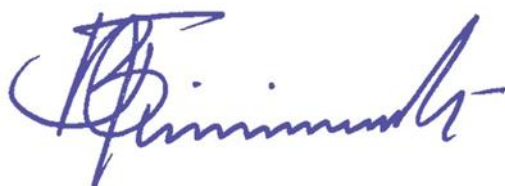
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## **DEDICATION**

This work is dedicated to my esteemed parents; my father Mr. Abel Chenyi and my mother Mrs. Anna Chenyi, they taught me the value of hard work and thirst for education and passion for reading.

## **ACKNOWLEDGEMENT**

First and foremost, I want to thank Almighty God for having brought me this far and without whose grace and love this would not have been achieved. Great gratitude to my supervisor Dr. Johnbosco Mutuku Kisimbi for his tireless effort and expert guidance during development of this project, thank you. To all my lecturers I greatly appreciate all your endless efforts to assist me achieve this research work. I am proud to be a masters student in this department and it is a great opportunity and experience for me to study with Kenyans.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

<b>CSOs</b>	Civil Society Organizations
<b>HIV/AIDS</b>	Human immunodeficiency virus and Acquired immunodeficiency
<b>IPRSP</b>	Interim Poverty Reduction Strategy Paper
<b>KCSAP</b>	Kenya Climate Smart Agriculture Project
<b>M &amp; E</b>	Monitoring and Evaluation
<b>NARDTC</b>	National Aquaculture Research Development and Training Centre
<b>NIMES</b>	National Integrated Monitoring and Assessment System
<b>USA</b>	United States of America

## ABSTRACT

Aquaculture provides millions of people globally with nutrients, the inexpensive protein which represents a tremendous opportunity to improve food security and nutrition. The performance of aquaculture development projects is being threatened by the effects of climate change, necessitating the concentrated use of mitigation and adaptation techniques. There must be guarantee of a consistent supply in the market for the aquaculture sector to be profitable and achieve a competitive advantage in global market. In this study, Kirinyaga County's NARDTC was used as a case study to evaluate the performance of aquaculture projects in Kenya as it is right now. The study's goals included determining the impact of budgetary procedures, stakeholder participation, technical capability, and the planning stage on the success of aquaculture projects in Kenya. Program Theory and Human Capital Theory were the theories utilised in the investigation. The study's research methodology was descriptive. One NARDTC project coordinator, 16 fish farming project managers, 10 evaluation and monitoring officers, 25 fish farming record officers, and 40 training officers who are taking part in the aquaculture projects that are administered by NARDTC, Kirinyaga County, make up the study's target population of 92 participants. The study has 75 responders as its sample size. The results of the descriptive study showed that budgetary practices had a positive influence on the accomplishment of fish farming projects in Kenya's Kirinyaga County. The outcomes also showed that the success of fishing projects in Kenya's Kirinyaga County is positively impacted by employee capacity. The study came to the conclusion that financial procedures in Kirinyaga County, Kenya, favorably affect the success of aquaculture projects. The study came to the further conclusion that the performance of the fish farming initiatives in Kirinyaga County, Kenya, is positively impacted by stakeholder involvement. The study came to the additional conclusion that practices related to personnel capacity had a favorable impact on effectiveness of aquaculture operations throughout Kirinyaga County, Kenya. The study suggests that in order for the fish farming project to be sustainable, funding should be allocated to the planning methodologies used by NARDTC administration in Kirinyaga County. Some of the planning process strategies that need an improvement include ensuring that there are monitoring and assessment strategies for successful project execution, making sure that activities are assigned and carried out as the project is implemented, make sure that time and allocated resources for a variety of M&E tasks and make sure that reporting schedules for implementation progress are available.

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the Study**

Aquaculture is the form of food production that is expanding the quickest worldwide. Aquatic organisms are raised in controlled freshwater or marine ecosystems. Aquaculture provides millions of people globally with nutrients, the inexpensive protein which represents a tremendous opportunity to improve food security and nutrition (Willer, & Aldridge, 2019). The increase in world population, the progressive depletion of finite resources required for sustainable growth, and the advancement of aquaculture are some future obstacles to the world's supply of fish protein.

The performance of aquaculture development projects is being threatened by climate change's consequences, necessitating concentrated use of mitigation and adaptation techniques. For the aquaculture industry to be successful and gain a competitive edge on the international market, there must be a guarantee of a steady supply on the market. This study examines the success of fish farming programs in Kenya at the moment, with a focus on NARDTC in Kirinyanga County. Appropriate monitoring and assessment processes on aquaculture projects, according to Ali, Upraity, Gurung, Dhar, and Belton (2018), guarantee a successful project and measurable performance of the project that meets the project goals and demands of all important stakeholders.

This monitoring and evaluation practices includes methods and equipment that make it easier to manage and complete project-related tasks within set deadlines, spending limits, and deliverables (Alex, 2016). Monitoring and evaluating (M&E), is a vital component of project management, as it aids the project managers in determining whether the project is going according to schedule. Regardless of the project's size, evaluation and tracking are essential since they reveal areas that need to be enhanced. According to Mrangu (2018), the use of M&E methodologies means that project results may be quantified at various stages of results, process, effect, outcome, and input to provide accountability framework and to help make informed choices at the project as well as policy levels.

The World Bank has improved its M&E standards and procedures in an effort to promote government involvement in developing countries. Adoption of M&E techniques in projects pertaining to the economy, culture, politics, and ecology has increased their significance on a global scale. As a result, companies have recognized the need to get ready for M&E, educate the M&E team member, and protect the integrity of the M&E data. The bulk of European and American countries have successfully incorporated M&E practices into their projects.

The United States government has put the principles into effect by emphasizing the value of M&E practices in development programs. Toscano (2019) assessment in the USA highlights how accurate assessments of a project's performance and progress are supported by the standards. M&E capacity development for employees involves a wide range of tasks, including as job placements, training programs, mentorship, and classroom instruction (Muiga, 2015). The success of the farmed project and excellent execution of the project will eventually be the outcome of a strong M&E team for fishing projects that has the essential skills, full-time classroom instruction, and dedication to M&E.

The Canadian government has established that agricultural project success is result of proper application of M&E methods. It is now possible to monitor and compare project progress against project objectives thanks to high M&E data quality (Micah, & Luketero, 2017). Another developed country in the world with consistent and effective M&E practices in the agriculture sector is Chile (Castelnuovo, 2018). The success of Chile's fish cultivation industries can be attributed to the enactment of M&E practices, which include building the capacity of the M&E team, making excellent information for M&E available, allocating adequate funds for M&E, and having appropriate M&E planning.

A successful M&E system, according to Shihemi (2016), was what determined how well Chinese farm projects performed. A successful project was made possible by efficient oversight of the execution evaluation and tracking processes, plus a guaranteed time period offered for deployment of no-cost enhancements to the system. Success in underdeveloped countries is troubling, according to Bennett, Singh, Ozawa, Tran, and Kang's (2011) gloomy appraisal of the project. In a nation like India, agricultural projects frequently have poor

results because monitoring and evaluation systems were not implemented effectively. These systems were characterized by corruption risks, a lack of institutional capacity, and an inability to effectively integrate agriculture operations.

Countries like Sri Lanka and Russia employ flexible, organized, and well-structured monitoring and evaluation processes. The local administrations in these nations are able to monitor and evaluate programs thanks to the steady decentralization of resources. As a result of the institutionalization of M&E approaches in agriculture projects, a framework for proper M&E resource and budget allocation during planning for M&E has been created, enabling careful project monitoring and evaluation. Damascene, (2019) claims that these procedures enable these nations to monitor the development of the projects effectively and efficiently, eliminating any possibility of incomplete projects and poor project performance.

According to Hubert and Mulyungi, (2018), compared to developed countries around the world, monitoring and evaluations is a field that is still developing in Africa. President Zuma established the Performance Monitoring and Evaluation Ministry in 2009, during his first month in office, in response to public outcry over the government's sluggish delivery of public services or the success of agricultural projects and other development activities, the Ministry of Finance ensured that M&E procedures were followed, including hiring trained M&E professionals, educating the M&E team, maintaining excellent information for M&E, and involving stakeholders in M&E planning.

Other Sub-Saharan African nations, including Ghana and Zimbabwe, have made excellent efforts to advance M&E standards used in health and other development programs. The Ghanaian government has persisted in employing M&E techniques to help with the better distribution of resources and planning of upcoming development initiatives (Hubert & Mulyungi, 2018). Despite its great accomplishments, Ghana still has a number of difficulties when carrying out projects and development initiatives. Insufficient data quality A few of these problems include inadequate capacity, operational challenges, untrained employees, low involvement of stakeholders, poor planning, and an unwillingness to develop and harmonize current M&E practices.

In 2000, Kenya made its first attempt at employing evaluation and monitoring methods for the Intermediate poverty reduction Policy Paper (IPRSP), however this approach had issues (Muchelule, 2018). During the same time frame, M&E was not routinely used by partners in development, including NGOs, companies, and organizations representing civil society (CSOs), and M&E reports were not shared with other partners or the government. These growth partners are unable to use M&E methods in their projects due to challenges finding competent and knowledgeable M&E employees, a lack of M&E funding, and the use of data of poor quality (Anunda, 2016).

According to Njenga (2018), NGOs across Kenya suffered from a lack of trained M&E staff, poor M&E submitting reports, and poor M&E quality of data, all of which have a big impact on M&E findings. According to Defontaine (2018), the Kenyan government established the Monitoring & Evaluating Directorate (MED) in 2003 to organize and supervise M&E operations across the entire country with the help of the 2030 Agenda and the Department of State for Planning Ministry. NIMES, developed by MED in 2003, makes it easier to supply services promptly and to monitor and assess development efforts.

For many years, the aquaculture sector in Kenya grew slowly. However, recently, fish farming increased all over the country thanks to the publicly sponsored Economic Stimulus package. So far, the program has helped to reduce poverty, promote regional development, and encourage Kenyan fish producers to think more commercially (Dobi, 2019). In actuality, national aquaculture output increased from 1,000 MT/y in 2000 (corresponding to 1% of the nation's fish harvest) to 12,000 MT/y in 2019, making up 7% of the total harvest. Over the following five years, production is anticipated to increase to 20,000 MT/y, accounting for 10% of the total output and cost USD 22.5 million.

At the National Aquaculture Research Development and Training Center in Sagana, Kenyan researchers have recently started raising native fish. About 104 kilometres northeast of Nairobi City, in Kirinyaga County, Sagana Centre is situated about 2 km inside Sagana Township. It is located 1231 meters above mean sea level at latitudes 0019'S and 37012'E.



The Center has 109 operational ponds spread across an area of around 59.37 hectares, 72 of which (150m<sup>2</sup>) are research ponds, the spawning, fingerling, and grow-out production occurring in the remaining ponds. The farm receives year-round gravity-fed water from the River Ragati.

The Sagana researchers started aquaculture research projects with the goals of enhancing fish growth, yield, productivity, survival, or a lower feed conversion ratio. Consumers can now purchase more fish food that is higher quality, less expensive, tastier, more nutritious, and safer thanks to these creative research initiatives. Lack of confirmed high-quality seed fish as well as feed, an ambiguous aquatic policy, inadequate financing for research, as well as a lack of knowledge of contemporary aquaculture technology, continue to be obstacles for Kenya's aquaculture industry. The study examined how M&E practices influences performance of fish farming projects in Kenya's Kirinyaga County.

## **1.2 Statement of the problem**

Currently, majority of developing nations' fisheries sectors continue to show stable expansion in terms of production, consumption and trade. For example, fish is a significant source of the vitamins A, B, and D, calcium, iron, and iodine. 400 million of the world's poorest people eat fish each year, accounting for more than 50% of all the protein and material consumed globally. With a 43% share of the global supply, aquaculture is a significant food-producing industry in Southeast Asia (Willer, & Aldridge, 2019).

The number of lawsuits has increased, there has been resource waste, clients and experts' reputations have been damaged by their involvement in unsuccessful farm projects, and there has been a lack of the desired product, service, or change (Jugdev & Muller, 2021). Projects frequently complain that they are underperforming, taking a very long time to complete, or not finishing at all. This has caused numerous projects to perform drastically below expectations, not just in Kenya but also globally.

The majority of farm projects lack competent M&E personnel who comprehend M&E systems and can create useful tools (Chesos, 2020). To improve quality, staff members working on agriculture projects should receive M&E training through manuals. A national

professional association of assessors should also be established to help M&E professionals advance their technical knowledge (Jaszczolt & Potkanski, 2016). As a result, they produce inadequate M&E systems that do not satisfy donor requirements and lead to project failure. Fisheries projects are guaranteed to be successful by generating targeted deliverable of quality while staying within the allocated time and budget through the suitable application of M&E approach (Idoro, 2019). It would be difficult to determine a project's orientation and evaluate its achievement and efficacy without making proper use of M&E procedures. As a result, a study investigation is required on M&E procedures and effectiveness of aquaculture programs in Kenya: a case study of NARDTC, Kirinyanga County.

Poor project performance is caused by the limitations of monitoring and assessment as part of the undertaking management cycle. A small number of projects have specifically studied particular aspects of the procedure of M&E and its impact on success of projects, in contrast to the numerous studies that touch on this idea. The purpose of this study was to close conceptual, spatial, and environmental knowledge gaps caused by this. For instance, the success rate of road construction projects is improved by stakeholders' engaged engagement in M&E budgetary allocation, according to Mandala's (2018) study on managing projects and decision-makers. When consumers are involved in the planning for M&E, performance of funded by government agricultural initiatives in semi-arid and arid areas is greatly enhanced, according to Akello and Moronge (2019) study. A strong M&E team promotes better M&E planning and more adaptable, satisfying project management, according to Mugo's (2017) study on M&E and Sustainable of Agriculture Food initiatives in Nyeri. None of the aforementioned studies looked at the methods used for monitoring and evaluating success of fish farming initiatives in Kenya, specifically the NARDTC example in Kirinyanga County. The objective of the current study was to fill in these knowledge gaps.

### **1.3 Purpose of the study**

The study purpose was monitoring and evaluation practices and performance of aquaculture projects in Kenya: a case of NARDTC, Kirinyanga County.

#### **1.4 Objectives of the Study**

The specific objectives were:

- i. To establish the influence of budgetary practices and performance of aquaculture projects in Kenya.
- ii. To determine influence of stakeholder involvement and performance of aquaculture projects in Kenya.
- iii. To find the influence of staff capacity and performance of aquaculture projects in Kenya
- iv. Assess the influence of planning process and performance of aquaculture projects in Kenya.

#### **1.5 Research Questions**

The study research questions included;

- i. How does budgetary practices influence performance of aquaculture projects in Kenya?
- ii. What is the influence of stakeholder involvement on performance of aquaculture projects in Kenya?
- iii. To what extent does staff capacity influence performance of aquaculture projects in Kenya?
- iv. How does planning process influence performance of aquaculture projects in Kenya?

#### **1.6 Justification of the Study**

Project managers may profit from this study since they are expected able to assess the value and advantages of monitoring while they carry out their projects. These project managers may also develop an awareness of how monitoring functions in various contexts and situations and offer suggestions on how to evaluate monitoring efficacy. The importance, advantages, and difficulties of monitoring may be revealed to the policymakers. As a result, they may be able to create policies and make educated choices.

The results of this study could be significant for academics and researchers. Academics may benefit from the study because it may inform them about the methods and results of Kenya's aquaculture project monitoring and assessment. The work might serve as the foundation for

more research. As a result, the study might contribute to the corpus of currently published literature and offer ideas for more research in the field.

### **1.7 Assumptions of the Study**

The study made the supposition that all respondents who was scientifically chosen could take part. Participants in the study were asked to respond to the research tools truthfully, willingly, objectively, and consistently.

### **1.8 Delimitations of the Study**

In the current study, the efficiency of fishing projects in Kenya was examined, with a focus on NARDTC, Kirinyaga County. Specific goals, financial procedures, participation of stakeholders, technical know-how, and the planning process all served as guidelines for the study. The study target population was 92 participants, this will include one NARDTC project coordinator, 16 aquaculture project managers, 10 monitoring and evaluation officers, 25 aquaculture record officers, and 40 training officers who are participating in the aquaculture projects that are managed by NARDTC, Kirinyaga county. Because they monitor the management procedures for the effectiveness of fish farming projects in Kirinyaga County, Kenya, the respondents were.

### **1.9 Definition of Significant Terms**

**M&E Practices:** these refers to extensive operations implemented in aquaculture project with the intention of acquiring data, analyzing it and reporting on its performance

**Planning process in M&E -** this process involves project planning, information collecting, assessment, and reporting in order to achieve project outputs and outcomes.

**Budgetary practices:** this is a specified sum of money set up for aquaculture project monitoring and assessment procedures.

**Staff capacity:** refers to providing training, adopting collaborative ways, and focusing on training material to enable individuals involved in the projects to carry out their tasks in efficiently, effectively, and sustainably monitor and evaluate. These initiatives seek to assist or empower persons working on projects who possess monitoring and evaluation skills.

**Stakeholder involvement:** refers to the rising understanding of the value of stakeholder involvement in M&E as a determining factor in its application.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The chapter gives literature overview on M&E practices as well as aquaculture programs performance. Review of the literature is done as per study objective. Theoretical and conceptual frameworks are also included. Finally, an overview of the available literature review is given, along with any research gaps brought on by previously reviewed literature.

#### **2.2 Performance of Aquaculture Projects**

Currently, majority of fisheries sectors in developing nations continue to show stable expansion in terms of production, consumption, and trade. Millions of people rely on fisheries and aquaculture for their livelihood (Willer, & Aldridge, 2019). Fish is a major source of vitamins A, B, and D, calcium, iron, and iodine, as well as more than half of the protein and food consumed by underprivileged people worldwide.

Aquatic organisms are raised in regulated or uncontrolled marine or freshwater habitats. With almost half share of the global supply, aquaculture is a significant food-producing industry in Southeast Asia (Edwards, Zhang, Belton, & Little, 2019). It is a significant economic activity that provides the region's growing population with a supply of nutritional protein. However, outbreaks of recognized and newly discovered fish diseases pose a hazard to aquaculture and result in significant global economic losses.

Aquaculture, which employs a wide range of animals and techniques for farming in varied setting. According to Xu, et., al., (2015), the majority of production comes from the aquaculture of seaweed, milkfish, which is tilapia, shrimp, carp, oysters, and mussels. Aquaculture contributes significantly to the food safety, job opportunities, and foreign exchange revenues of the country. More quickly than industries that rely on catch, aquaculture is expanding. But from fourth in 1985 to eleventh in 2005, Philippines' position in the production of aquaculture has gradually declined. The Philippines used to produce 5% of the world's farmed fish, but now it only accounts for slightly more than 1%.

Investments totaling more than NGN 14 billion/USD 13.2 million, have been made in a substantial Fish Innovation Lab lean production project in Nigeria from both governmental and private sources. About 200 fish farmers and processors are being trained as part of the project to implement lean management practices in their production activities. The knowledge obtained from these trainings enables the initiative to look into ways to scale up the adoption of lean management principles in aquaculture across the entire nation.

The only other export to Uganda after coffee is fish, although due to increased fishing pressure, the beneficial impact from fisheries that are captured is declining (DFR, 2015). Aquaculture generates income, provides food, and creates jobs, claim Rutaisire et al. (2009). Additionally, it makes money through exporting seed to the African nation of Tanzania the country of the Democratic Republic of the Congo, and Rwanda as well as fishing bait to Kenya and Tanzania (FAO, 2017).

In order to promote superior Nile tilapia and African catfish breeds and the best health management practices for climate-smart aquaculture, Egerton University is working with other collaborating institutions from universities and research institutions in Kenya to implement the KCS project. The project aimed at increasing aquacultural productivity, foster resilience, and lower greenhouse gas emissions in the country.

Both the governments national and county in Kenya must refocus on aquaculture as a possible source of employment, food security, and nutrition, a strategy that Asian nations have successfully implemented. To ensure aquaculture output intensification in the face of declining land and water resources, technology and innovative thinking are also required.

### **2.3 Budgetary practices and Performance of Aquaculture Projects**

A budget can be used by those in the position of purchasing to determine the extent to which of the money at their disposal to allot to each project component. You can organize the project's various components by establishing the priorities for your budget. To assess how effectively informed are employed in project management, M&E budget can be contrasted with the overall project budget (Ika, Diallo, & Thuillier, 2018). Additionally, evaluation planning budget and actual evaluation costs should both be more carefully predicted and

managed (Muchiri, 2014). Money is needed for the staff, management of the support data system, training initiatives, transportation, and other associated tasks. Outsourcing resource expenses are significant elements that need to be included in the budget (Zapico-Goi, 2017).

Before approving any funding requests, making sure that M&E are included in the budget is a recent priority for donors. Contrarily, implementing agencies place little to no focus on M&E, and the majority of them work to avoid putting in place organizational frameworks that can enable M&E. Nyakundi (2014) argued that the directorate has faced difficulties with its human resources and budgetary capability, due to which it has been unable to create the fully effective monitoring and evaluation process that was anticipated while the NIMES was first founded.

According to Mandala (2018), the performance of road construction projects is strongly influenced by M&E budgetary allocation. It is advised that in order to improve performance of road building projects, project planning and decision-makers actively participate in M&E budgetary allocation. Additionally, recommendations for policies that would increase M&E budget allocations and enhance project performance and implementation.

#### **2.4 Stakeholder Involvement and Performance of Aquaculture Projects**

Stakeholder involvement in M&E refers to the process when stakeholders from various levels take part in M&E projects, programs or policies while sharing control over the activities' contents, methods and results and taking or identifying corrective action (Saiful, 2018). The effectiveness of farm project planning for M&E is frequently impacted by stakeholder absence.

According to Khan (2017), involving stakeholders in project M&E planning fosters a sense of project ownership throughout the entire project. Stephen (2015) stated in an assessment of the results of M&E procedures used by NGOs conducting HIV/AIDS projects in Uganda that stakeholder involvement encourages sponsors to support the project, which improves its performance. Discussions about the how, why, and which project activities will be carried out must include stakeholders.

The performance of aquaculture development projects is being threatened by climate change's consequences, necessitating concentrated use of mitigation and adaptation techniques. For the aquaculture industry to be successful and gain a competitive edge on the international market, there must be a guarantee of a steady supply on the market. This study examines the success of fish farming programs in Kenya at the moment, with a focus on NARDTC in Kirinyanga County. Appropriate monitoring and assessment processes on aquaculture projects, according to Ali, Upraity, Gurung, Dhar, and Belton (2018), guarantee a successful project and measurable performance of the project that meets the project goals and demands of all important stakeholders.

According to Njuki, Kaaria, Chetsike, and Sanginga (2013), local stakeholders must be included in projects in order to increase outputs, outcomes and results. In Nakuru study by Mushori (2015) discovered that stakeholders' participation during the M&E phase is crucial for project success and raises project performance. This study evaluates Kenyan aquaculture projects' performance and stakeholder involvement.

### **2.5 Staff Capacity and Performance of Aquaculture Projects**

Human capital training requirements are essential for trustworthy M & E, mandating that to ensure high-quality M&E results, staff employees possess needed M&E abilities (Maphunye, 2018). For implementation of M&E approach that works, management must carefully choose candidates with appropriate abilities and regularly enhance those candidates' competencies. Adoption of M&E practices should heavily spend in M&E staff training and development. Maphunye (2018) study on the issues of human capacity in the process, this would help to build the team's capacity. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities.

According to Ika, Diallo, and Thuillier's (2018) study on managing tasks in worldwide suggested initiatives, M&E capacity development for employees involves a wide range of tasks, including as job placements, training programs, mentorship, and classroom instruction (Muiga, 2015). The success of the farmed project and excellent execution of the project will eventually be the outcome of a strong M&E team for fishing projects that has the essential skills, full-time classroom instruction, and dedication to M&E. Agricultural projects need a



capable M&E team to function efficiently, claims Wanja (2017). The M&E team must possess the requisite skills and capacity to participate in M&E.

Monitoring and evaluation of staffs that handle data often throughout a project should be continuously trained abilities required for M&E data gathering, presentation, and analysis (Marsden, Caffrey, & McCaffery, 2017). Demissie (2015) discovered that a shortage of skilled M&E personnel results in the generation of low-quality M&E data, which results in subpar project execution and consequently subpar project performance.

## **2.6 Planning Process and Performance of Aquaculture Projects**

Planning in monitoring and evaluation entails proactively scheduling project operations to enable monitoring and assessment (IFRC, 2011). The project's progress and how well it is producing the anticipated outputs and outcomes are to be assessed and reported using the M&E plan's objectives. Planning for M&E at the outset of any project is crucial since it gives the project's objectives a thorough roadmap. High-quality M&E planning results in successful aquaculture project performance (Ongondo, 2017).

The project assessment plan includes outlines the evaluation-related issues that will be addressed. The metrics that need to be tracked, the people in charge of collecting them, the instruments and forms to be utilized, and the company's information method of distribution are all described in an M&E plan (Bullen, 2014). Due to the lack to pay attention paid to detail throughout the planning stage, many systems for monitoring and evaluation would fail absent the adoption of M&E plans (Sinister, 2015).

According to report by IFAD (2016), most developing nations face difficulties implementing projects because inadequate M&E resources were not allocated during planning for M&E. Study by Abraham (2018) support this claim, advising that M&E budget allocation during planning for M&E be done properly to prevent erroneous fund allocation that would make it impossible to undertake projects.

The importance of developing a project activity calendar while preparing for M&E was highlighted by Njeri and Omwenga (2019). This plan of action will be used during the course of the project's execution for contrasting the real schedule for tasks with the originally established timetable in order to establish whether the project has been carried out in the proper sequence. Stephen (2015) suggested that careful timing of activities from one phase to the next during M&E planning facilitates the attainment of the stated objectives. It is simple to keep on schedule when activities are planned in advance, which promotes the effectiveness of health programs and efficient project execution (Mensah, 2017). By allowing them to monitor their operations, gain insight into the errors they make, and improve their products and services while complying with the project movement time frame to ensure high project performance.

## **2.7 Theoretical framework**

Program Theory and the Human Capital Theory were two of the theories employed in this investigation.

### **2.7.1 Program Theory**

Huey Chen and colleagues developed program theory in 1995. This theory gave a lot of emphasis to how change is brought about and who is responsible for it. Program theory has long been a helpful tool to track evaluations; it was known for its definitive method of problem-solving and accepts the need to include our evaluations to support the findings. Additionally, it offers options for influencing evaluation's influential regions (Sethi & Philippines, 2012).

The theory also examines how money is used strategically and how the target population receives the aid they seek. The program theory gives in-depth explanations of how the intended actions for certain target populations represent the anticipated societal benefits. Utito (2010) uses a theoretical structure to illustrate the results of M&E.

It offers the chance to allocate project outcomes from various initiatives or occasions and to specify predicted and unforeseen effects of the strategy. The program theory explains what happens when inputs and processes are changed to improve performance, which leads to

beneficial results. The elements influencing the mechanism's output, or performance, are related to its inputs. In this example, the factors include planning stage, technological expertise, stakeholder participation, and managerial involvement.

The study examines M&E procedures and effectiveness of aquaculture projects in Kenya might be connected to program theory. The theory establishes a connection between performance measure identification at each stage of the logical model. By keeping an eye on things and taking remedial action when things veer off course to make sure the goals are achieved, it addresses any concerns about uncertainty within the project. Program theory demonstrates single obvious outcome that strategy has generated, which helps assess whether the anticipated achievement level has changed.

### **2.7.2 Human Capital Theory**

Becker (1962) proposed Human capital theory. According to the notion, workers who receive education or training become more productive because they gain practical knowledge and skills, boosting their lifetime output and, in turn, their income. By raising the degree of mental stock of profitable human aptitude, which derives from inherent abilities and investment in people, education promotes employee productivity (Jones (2012), Schmidt (2007), Bapna (2013)).

It's often said that a company is only as good as its employees. The success of a company depends heavily on the directors, leaders, and employees who make up its workers' capital or project capital. The notion views people as assets and contends that companies will see good returns on their investments in people. It contends that a company has a durable competitive advantage when its human resource base is incomparable to that of its competitors (Barney 1991).

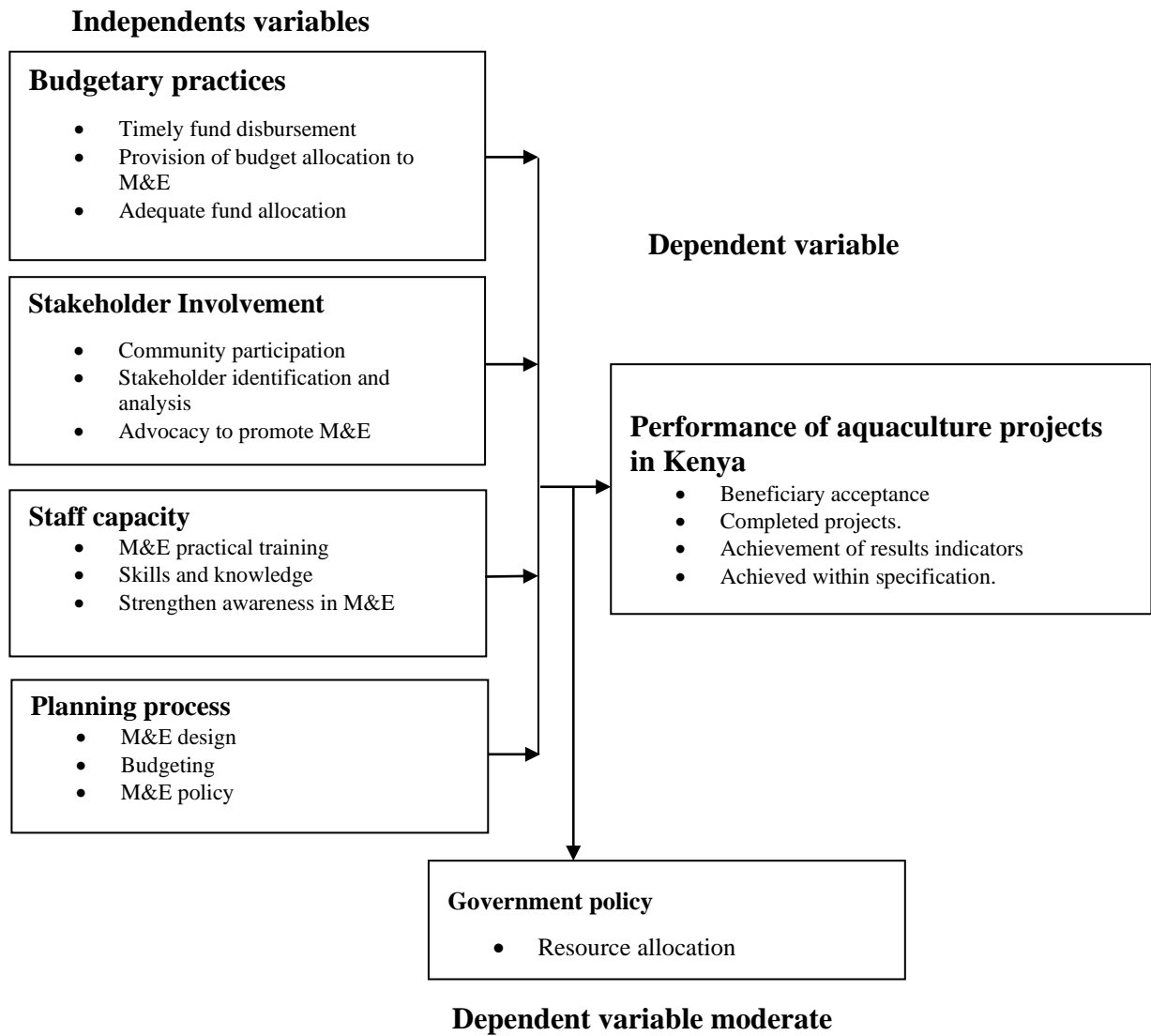
Since the theory is related to staff capacity, one of the study's variables that are independent, it is relevant to the research. M&E capacity development for employees involves a wide range of tasks, including as job placements, training programs, mentorship, and classroom instruction (Muiga, 2015). The success of the farmed project and excellent execution of the

project will eventually be the outcome of a strong M&E team for fishing projects that has the essential skills, full-time classroom instruction, and dedication to M&E.

Human capital training requirements are essential for trustworthy monitoring and evaluation, as they mandate that staff employees possess the requisite technical M&E skills to ensure superior M&E findings. To implement an M&E approach that works, management must carefully choose candidates with the appropriate abilities and regularly enhance those candidates' competencies. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities.

## **2.8 Conceptual Framework**

Independent variables in study include budgetary practices, stakeholder involvement, staff capacity and planning process. The performance of aquaculture projects in Kenya will be the dependent variable against which independent factors will be compared. Conceptualization of the study variables is shown in Figure 2.1.



**Figure 2.1: Conceptual Framework**

## 2.9 Summary of Literature Review and Research gaps

A summary of the research review and research gaps is given in Table 2.1.

**Table 2.1: Summary of Literature Review and Research gaps**

Variable	Author (year)	Study title	Methodology used	Study Findings	Knowledge Gaps	Focus of Current Study
Budgetary practices	Mandala (2018)	The effectiveness of road construction projects as a result of M&E budgetary allocation	The research used a cross-sectional survey methodology	performance of road construction projects is strongly influenced by M&E budgetary allocation	The research depended on secondary data, whereas primary data would have given the findings more weight due to its objectivity.	This research only used primary data.
Stakeholder involvement	Akello & Moronge 2019	Examined success of state owned agricultural initiatives in arid regions in relation to M&E practices	Descriptive and inferential analys were both used	Performance of funded by the government agricultural projects in arid and semi-arid regions increases when stakeholders are incorporated in M&E planning	The study discovered a geographical gap; the study was carried out in semi-arid and desert areas.	While this study was conducted in Kirinyaga county
Staff capacity	Mugo (2017)	M&E Impact, Ethics, and Sustainability of Agriculture Food Crop Projects in Nyeri County	Research design adopted for the study was case study design.	The study discovered that a project with a well-capable M&E staff succeeds more often.	The study did not specify the appropriateness of the sample, the research project did not specify the population of interest. Another flaw is that the research was carried out solely in Nyeri county.	This study went into great detail about the object in question population from whom the sample was drawn. To ensure that the study design is well explained
Planning process	Sanganyi (2016)	Application of M&E procedures in infrastructure projects,	The methodology employed is unclear. Only quantitative data was used.	According to the findings of the study, low resource cause poor project performance	Results show, low resource allocation for M&E operations resulted in poor project performance	The current study utilized both qualitative and quantitative technique

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

The chapter describes study methodology. Namely population and sample, gathering and analyzing information, as well as research design were all included in this.

#### 3.2 Research Design

The current study used a descriptive research approach to collect, evaluate, and present data. This study recommends the descriptive survey because it was the most successful at taking into account the various perspectives, attitudes, and perceptions by combining both techniques (quantitative and qualitative) It enables the study research to extrapolate the findings outside of a particular area, setting, or incident by eliminating bias and improving the accuracy of the data to be obtained.

#### 3.3 Target Population

This research study targeted 92 participants which included NARDTC project coordinator, 16 aquaculture project managers, 10 monitoring and evaluation officers, 25 aquaculture record officers, and 40 training officers who are participating in the aquaculture projects that are managed by NARDTC, Kirinyaga county. The study used all of the respondents connected to the aquaculture projects under management of NARDTC, Kirinyaga County. As a result, the 92 individuals who were the target censured population stayed. The target demographic for the study is depicted in Table 3.1.

**Table 3.1: Target Population**

	<b>Target population</b>
NARDTC project coordinator	1
Managers of aquaculture projects	16
M&E officers	10
Record officers of aquaculture projects	25
Training officers	40
<b>Totals</b>	<b>92</b>

**Source: NARDTC is located in Kirinyaga County**

#### 3.4 Sample Size and Sampling technique

The method of sampling specifies the sampling method and sample size.

### 3.4.1 Sampling technique

To reduce skewed parameter evaluations, study aims to gather data from a sample that appropriately represents the population. At the NARDTC in Kirinyaga County, Kenya, purposive sampling method was used to select respondents. NARDTC project coordinator, aquaculture project managers, M&E officers, officers managing records, and training officers who are taking part in aquaculture projects that are managed by the NARDTC were chosen using a purposeful sampling technique. Because they supervise the management procedures of the execute of aquaculture projects in Kirinyaga County, Kenya.

### 3.4.2 Sample size

The most practical and straightforward equation that study was adopt is Yamane's (1967) sampling formula, as shown below;

$$n = (N / (1 + N(e)^2))$$

Where:

N stands for population size, n for sample size, and e for an error margin of 5%.

N = 92 the study target population individuals; e = 5%; for the study.

Consequently, changing the formula's variables results in a sample size of

$$\begin{aligned} n &= (92 / (1 + 92(0.05)^2)) \\ &= 74.796 \\ &= 75 \text{ respondents} \end{aligned}$$

To choose the respondents for each stratum, stratified random sampling was used in the study as shown in table 3.2.

**Table 3.2 Sample Size Determination**

	<b>Target population</b>	<b>Percent (%)</b>	<b>Sample size</b>
NARDTC project coordinator	1	1.1%	1
Managers of aquaculture projects	16	17.4%	13
M&E officers	10	10.9%	8
Record officers of aquaculture projects	25	27.2%	20
Training officers	40	43.5%	33
Totals	92	100.0%	75

**Source: NARDTC is located in Kirinyaga County**



### **3.5 Data Collection Instruments**

The investigation employed first-hand data. The data was gathered using techniques such as interviews and surveys. Questionnaire had closed-ended questions and open-ended questions. Questionnaires allowed the person conducting the study to quickly collect accurate data. The questionnaire made it easier for the researcher to have direct conversations with respondents and collect insightful data. A Likert scale of 1 to 5 was used to assess the closed-ended questions as illustrated in appendix ii. The interview schedules were utilized to collect information on personal opinions, views, and feelings from one NARDTC project coordinator, 3 aquaculture project managers and 2 monitoring and evaluation officers.

### **3.6 Pilot Testing**

About 8 respondents, or 8.7% of the sample population, participated in the research pilot study but were left out of the main investigation. Internal and external validity testing were carried out to make sure the instrument was valid. Face validity was assessed based on how quickly respondents responded to the survey questions. The study respondents could understand and reply to the questions because they had been made clear. Utilizing supervisor comments on the research constructs, the survey procedure was improved.

#### **3.6.2 Reliability of the Instruments**

A survey tool's dependability is determined by its innate ability to accurately replicate comparable test results for participants or items of equal value. Internal uniformity and reliability between tests are the two most frequently utilized indicators of a scale's dependability. Using benchmark of 0.7 Cronbach's Coefficient Alpha, instrument's dependability was evaluated.

### **3.7 Data Collection Procedure**

The practice of acquiring unprocessed, raw data that can be transformed into useable data by employing a scientific method of data analysis is known as data collection. The NARDTC project coordinator, aquaculture project managers, monitoring officers, aquaculture record officers, and training officers who are participating in aquaculture projects managed by NARDTC provided questionnaire responses as the study's main source of data. The study was approved by the university before it began. The researcher met with the key informants to discuss ways to reach the target group and also requested a permit letter from the

NACOSTI. The intended audience members were instructed on the significance of the interview and sessions, and schedules for interview sessions and interviews were created. The researcher was assisted by investigators who visited the sampled respondents and distributed the survey materials and interview schedules after receiving training beforehand. The research data were gathered using the drop and pick method. The drop and pick method was suited for this study because it increased the response rate.

### **3.8 Data Analysis Techniques**

Data analysis is the methodical manipulation, treatment, arrangement, and organization of data in order to provide relevant information. The data underwent qualitative as well as quantitative processing. The percentages, standard deviations as well as mean were used in descriptive statistical analysis. The research results were analyzed using SPSS, Version 22. To facilitate simple understanding and comprehension of the results, tables were utilized to depict the examined data results.

### **3.9 Ethical Issues**

The primary goal of this research project is the pursuit of knowledge and the truth, and ethics forbid data manipulation in achieving this goal. Due to the fact that it fosters an environment of respect, accountability, and trust among researchers, ethical behavior is also essential for collaborative research. The researcher initially obtained a research permission from NACOSTI before starting this investigation. Respondents voluntarily took part in data gathering through informed permission. Before distributing the surveys, consent was obtained from both the NARDTC administration and the study participants to assure autonomy.

Researcher guaranteed the study participants would not suffer any negative physical or psychological effects as a result of participation in the study. Also included was the emotional suffering of the participants. As a result, it is the responsibility of the researcher to plan and carry out their research in a way that prevents any form of harm. Each volunteer received considerate treatment and had the choice to decline participating in the study if they so desired.

### 3.10 Operationalization of Variables

The operationalization of study variables is as presented in table 3.2.

**Table 3.2 Operational Definition of Variables**

<b>Objectives</b>	<b>Type of Variable</b>	<b>Indicator</b>	<b>Measurement scale</b>	<b>Tools of analysis</b>	<b>Type of analysis</b>
Performance of aquaculture projects in Kenya	Dependent variable	<ul style="list-style-type: none"> <li>•Accepted by beneficiary</li> <li>•Number of projects completed</li> <li>•Achievement of results indicators</li> <li>•Achieved within specification</li> </ul>	Nominal	Percentage Mean Standard deviation	Descriptive analysis
Establish the influence of budgetary practices and performance of aquaculture projects in Kenya	Budgetary allocation (independent variable)	<ul style="list-style-type: none"> <li>• Timely fund disbursement</li> <li>•Amount allocated for M&amp;E</li> <li>•Adequate fund allocation</li> </ul>	Nominal	Percentage Mean Standard deviation	Descriptive analysis
Determine influence of stakeholder involvement and performance of aquaculture projects in Kenya	Stakeholder involvement (independent variable)	<ul style="list-style-type: none"> <li>• Community participation</li> <li>•Collaborations</li> <li>•Stakeholder identification and analysis</li> <li>•Advocacy to promote M&amp;E</li> </ul>	Nominal	Percentage Mean Standard deviation	Descriptive analysis
Find the influence of staff capacity and performance of aquaculture projects in Kenya Violence Project in Kenya	Technical capacity (independent variable)	<ul style="list-style-type: none"> <li>• M&amp;E practical instruction, knowledge, and awareness augmentation</li> </ul>	Nominal	Percentage Mean SD	Descriptives
Assess the influence of planning process and performance of aquaculture projects in Kenya	Planning process (independent variable)	<ul style="list-style-type: none"> <li>•M&amp;E design</li> <li>•Budgeting</li> <li>•M&amp;E policy</li> <li>•Log framework</li> </ul>	Nominal	Percentage Mean SD	Descriptives

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS

#### 4.1 Introduction

This section includes the study findings as well as descriptions of the demographics, descriptive analysis results, and research response rate. Tables are used to display the results. Thematic analysis and interpretive techniques were used in the evaluation of qualitative data. The findings are given in narrative form and with verbatim citations.

#### 4.2 Questionnaire Return Rate

Finding questionnaire return rate is crucial since a low response rate suggests that the validity of the research findings may be in doubt. The investigation's objective was to ascertain the instrument return rate, and table 4.1 presents the findings.

**Table 4.1 Questionnaire rate data.**

	No. of questionnaires	Percentage
Returned questionnaires	68	90.7%
Unreturned questionnaires	7	9.3%
<b>Total</b>	<b>75</b>	<b>100.0%</b>

An overall response rate of 90.7% was achieved with the distribution of 75 surveys, 68 of which were carried out effectively and returned. An acceptable return rate for analysis is one of more than 50%, more than 60% is good, more than 70% is very good, and more than 80% is outstanding (Babbie 2004), hence 90.7% return rate was satisfactory for the study. For interviews, all interviewers namely one NARDTC project coordinator, 3 aquaculture project managers and 2 monitoring and evaluation officers.

#### 4.3 Demographic Features of Participants

In this section, we list the fundamental characteristics of the respondents, such as gender, age, educational attainment, and length of employment at NARDTC. The following sub-themes further clarify them:

##### 4.3.1 Distribution of Respondents by Gender

The genders of the respondents were revealed by the NARDTC survey. The study's conclusions are gender-neutral and are displayed in figure 4.2.

**Table 4.2: Distribution of Respondents by Gender**

	<b>Frequency</b>	<b>Percent</b>
Male	47	69.1
Female	21	30.9
<b>Total</b>	<b>68</b>	<b>100</b>

The study's findings showed that 30.9% of participants were women and 69.1% of those who participated were men. According to the results, men made up the majority of study participants, but the difference is not very significant. The majority of men who monitor and evaluate aquaculture operations are men, although there are also a fair number of women involved, and this can be attributed to increase in education opportunity for girls and women.

#### **4.3.2 Distribution of Respondents by Age**

Another objective of the study was to determine the participants' ages. The results of the research about the population's age distribution are shown in Table 4.3.

**Table 4.3: Distribution of respondents by Age**

	<b>Frequency</b>	<b>Percent</b>
18 - 30 years	16	23.5
31 - 40 years	32	47.1
41 - 50 years	14	20.6
Above 50 years	6	8.8
<b>Total</b>	<b>68</b>	<b>100</b>

Results of table 4.3 show, majority of (47.1%) participants were between the ages of 31 and 40, 23.5% were between the ages of 18 and 30, and 20.6% said they were between the ages of 41 and 50. 8.8% of respondents said they were 50 years or older. The majority of respondents, according to the findings, were between the ages of 31 and 40. The performance of fish farming initiatives in Kenya will be boosted by ensuring equitable representation of youth throughout monitoring and evaluation procedures: a case study of NARDTC, Kirinyaga County.

#### **4.3.3 Distribution of Respondents by Educational Background**

The information about participants' educational level was critical in the study because a high educational level results largely from comprehension of ideas and information, thereby increasing individual input in enhancing the effectiveness of the data collection process for

making correct statistical inferences. Table 4.4 shows response given by respondent's educational background results.

**Table 4.4: Educational background of respondents**

	<b>Frequency</b>	<b>Percent</b>
Postgraduate	7	10.3
Undergraduate	28	41.2
diploma	23	33.8
certificate	10	14.7
<b>Total</b>	<b>68</b>	<b>100</b>

Table 4.4 summarizes the findings and reveals that 41.2% of respondents said they had at least undergraduate education level, 33.8% had a diploma level of education, only 10.3% of respondents claimed to have received a postgraduate degree, while 14.7% had finished certificate-level study. The findings showed that undergraduates made up the bulk of the participants. To implement an M&E approach that works, management must carefully choose candidates with the appropriate abilities and regularly enhance those candidates' competencies. Adoption of M&E practices should heavily spend in M&E staff training and development. Maphunye (2018) study on the issues of human capacity in the process, this would help to build the team's capacity. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities.

#### **4.4.4 Duration of Respondents at NARDTC**

The results on the duration of respondents at NARDTC are as shown in table 4.5.

**Table 4.5: Duration of respondents at NARDTC**

	<b>Frequency</b>	<b>Percent</b>
3-6 years	18	26.5
6-8 years	30	44.1
8- 10years	15	22.1
More than 10 years	5	7.3
<b>Total</b>	<b>68</b>	<b>100</b>

Table 4.5's summary of the findings reveals that, 44.1% respondents had been workers at NARDTC for a period of between six and eight years, 26.5% indicated a period between three and six years, and 22.1% indicated eight and ten years. 7.3% of respondents said they have been workers at NARDTC for a period above 10 years..

#### 4.4 Descriptive Statistics

This section presents the findings from the descriptive evaluation of the study. The percentage, the mean, and standard deviation were all included. The description outcomes are displayed for each variable.

##### 4.4.1 Performance of aquaculture projects in Kenya

This section gives the opinions of the respondents on the effectiveness of fish farming projects in Kenya as studied dependent variables: a case study of NARDTC, Kirinyaga County. When asked if they believed that adequate monitoring and evaluation systems ensured fish farming projects would succeed by delivering desired results of the highest quality on scheduled and within the given budget, the respondents gave their opinions. Table 4.6 presents the findings.

**Table 4.6: Whether effective monitoring and evaluation practices improves aquaculture projects success**

	<b>Frequency</b>	<b>Percent</b>
Yes	54	79.4
No	14	20.6
<b>Total</b>	<b>68</b>	<b>100</b>

Results show, 79.4% participants agreed effective M&E procedures guarantee aquaculture projects success by producing targeted outcomes of high quality on schedule and within the allotted budget while 20.6% disagreed. This implies that effective M&E procedures guarantees aquaculture projects success by generating targeted outcomes of high quality on schedule and within the allotted budget as indicated by majority respondents. It is significant economic activity that provides the region's growing population with a supply of nutritional protein. However, outbreaks of recognized and newly discovered fish diseases pose a hazard to aquaculture and result in significant global economic losses. Aquaculture contributes significantly to the food safety, job opportunities, and foreign exchange revenues of the country. More quickly than industries that rely on catch, aquaculture is expanding. About 200 fish farmers and processors are being trained as part of the project to implement lean management practices in their production activities. The knowledge obtained from these trainings enables the initiative to look into ways to scale up the adoption of lean management principles in aquaculture across the entire nation.

The study adopted items presented in table 4.7 as measures of performance of aquaculture projects in Kenya, Kirinyaga County.

**Table 4.7: Performance of aquaculture projects in Kenya**

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
Increased number of agriculture projects completed within the county	(2)2.9%	(10)14.7%	(2)2.9%	(30)44.1%	(24)35.3%	3.94	1.12
Increased access to agriculture products by farmers	(4)5.9%	(0)0.0%	(13)19.1%	(24)35.3%	(27)39.7%	4.03	1.06
Aquaculture projects are achieved within specification, i.e. time and budget	(6)8.8%	(2)2.9%	(7)10.3%	(22)32.4%	(31)45.6%	4.03	1.22
Increased trainings for the local on aquaculture practice	(2)2.9%	(4)5.9%	(7)10.3%	(22)32.4%	(33)48.5%	4.18	1.04
The aquaculture projects have been accepted by beneficiary	(5)7.4%	(5)7.4%	(11)16.2%	(13)19.1%	(34)50.0%	3.97	1.28
<b>Aggregate</b>						<b>4.03</b>	<b>1.14</b>

On the increased number of agriculture projects completed within the county, (30)44.1% agreed, (24)35.3%, strongly agreed, (2)2.9% strongly disagreed, (10)14.7% disagreed and (2)2.9% were neutral. There is a need for improvement to ensure the successful completion of fish farming projects in Kenya, Kirinyaga County, since the aforementioned statement's mean value is 3.94, less than the average of the composite of 4.03, showing that negatively effects the study's dependent variable.

The study results revealed that (24)35.3% and (27)39.7% respondents respectively agreed and strongly agreed that there is increased access to agriculture products by farmers, (13)19.1% were not sure, while only (4)5.9% disagreed that there is increased access to agriculture products by farmers. The average mean score for was 4.03 for the group. This suggests that the line statement has a beneficial impact on how well aquaculture ventures succeed in Kenya, Kirinyaga County. Benefits of successful M&E practices on aquaculture projects as a crucial component of project management is monitoring and evaluation is that it helps the project managers decide if the project is proceeding according to plan, the monitoring and assessment are crucial since they identify areas that require improvement.



From the results, (22)32.4% and (31)45.6% respondents agreed and strongly agreed that aquaculture projects are achieved within specification, i.e. time and budget, (6)8.8% strongly disagreed, (2)2.9% disagreed while (7)10.3% respondents neither agreed nor disagreed. An average value of 4.03 for this line statement suggests that it has a favorable impact on the success of aquaculture projects in Kenya's Kirinyaga County.

The study's findings also indicate that (33)48.5% of the people polled strongly agreed that there should be more training for local aquaculture practitioners, while (22)32.4% agreed, (7)10.3% agreed, and (2)2.9% and (4)5.9% disagreed, respectively. The line statement had a mean value of 4.18, which indicated that most respondents agreed with it. The benefits of successful M&E practices on aquaculture projects as a crucial component of project management is monitoring and evaluation is that it helps the project managers decide if the project is proceeding according to plan, the monitoring and assessment are crucial since they identify areas that require improvement.

Lastly, (5)7.4%, (5)7.4%, (11)16.2%, (13)19.1% and (34)50.0% respondents respectively strongly disagreed, disagreed, were neutral, agreed and strongly agreed that aquaculture projects have been accepted by beneficiary. The line statement's mean score of 3.97, which is lower than the aggregate mean value of 4.03, suggests that the statement has a negative impact on the operation of aquaculture projects in Kenya's Kirinyaga County, necessitating improvement.

The average mean value of 4.03, indicates majority among respondents agreed alongside the statement used to gauge the success of fish farming projects in Kenya's Kirinyaga County. The overall standard deviation of 1.14 shows that there were only minor variances in the responses provided by the respondents. Aquaculture generates income, provides food, and creates jobs, claim Rutaisire et al. (2009). Additionally, it makes money through selling seed to Tanzania, the Democratic nation of the Congo, and Rwanda as well as fishing bait to Kenya and Tanzania. Aquaculture offers cheap protein and nutrients to millions of people worldwide, creating a huge opportunity to enhance food security and nutrition.

#### 4.4.2 Budgetary Practices and Performance of aquaculture projects in Kenya

The study determined how budgeting policies affect aquaculture project performance in Kenya. First, those surveyed were asked if they thought the money set aside for monitoring and evaluation of aquaculture projects was adequate. The outcomes are displayed in table 4.8.

**Table 4.8: Whether funds allocated for M&E of aquaculture projects is adequate**

	Frequency	Percent
Yes	56	82.4
No	12	17.6
<b>Total</b>	<b>68</b>	<b>100</b>

Table 4.8's findings indicate that 82.4% of respondents believed that the funding allotted for M&E of fish farming projects in Kenya's Kirinyaga County were sufficient, while 17.6% disagreed. This study finding implies that funds allocated for M&E of aquaculture projects in Kenya, Kirinyaga County was adequate. Setting your budget's priorities will help you organize the project's many parts. Monitoring and evaluating (M & E), a critical part of project management, aids the project managers in determining whether the project is going according to schedule. Regardless of the project's size, evaluation and tracking are essential since they reveal areas that need to be enhanced. According to Mrangu (2018), the use of M&E methodologies means that project results may be quantified at various stages of results, process, effect, outcome, and input to provide a framework for accountability and to assist making informed choices at the project as well as policy levels. Adoption of M&E techniques in projects pertaining to the economy, culture, politics, and ecology has increased their significance on a global scale. As a result, companies have recognized the need to get ready for M&E, educate the M&E team member, and protect the integrity of the M&E data. Money is needed for staff, management of the support data system, training initiatives, transportation, and other associated tasks. Outsourcing resource expenses are significant elements that need to be included in the budget (Zapico-Goi, 2017).

The results on respondents opinions on agreement with statements on budgetary practices are shown in table 4.9.

**Table 4.9: Budgetary Practices**

	strongly disagree	disagree	neutral	agree	strongly agree	Mean	Std Dev
Aquaculture projects	(1)1.5%	(4)5.9%	(17)25.0%	(35)51.5%	(11)16.2%	3.75	0.85

are allocated adequate amount							
There timely disbursement of project funds	(1)2.9%	(11)16.2%	(15)22.1%	(35)54.4%	(3)4.4%	3.41	0.92
There is provision of budget allocation to M&E	(0)0.0%	(0)0.0%	(15)22.1%	(48)70.6%	(5)7.4%	3.85	0.53
The amount allocated for M&E activities is enough	(5)7.4%	(6)8.8%	(16)23.5%	(28)41.2%	(13)19.1%	3.56	1.12
<b>Composite mean and standard deviation</b>						<b>3.64</b>	<b>0.86</b>

The findings showed that (35)51.5% of respondents agreed that adequate funds are allocated for aquaculture projects, (11)16.2% strongly agreed, (4)5.9% disagreed, (17)25.0% were neutral, while only (1)1.5% respondents strongly disagreed. The mean score of this line item is 3.75 that is greater than composite mean 3.64, this implies that this line statement positively influences aquaculture projects success in Kirinyaga County, Kenya.

The percentages of respondents who agreed, strongly agreed, disagreed, and did not respond to the statement "There timely payment of project funds" were (35)54.4%, (3)4.4%, (1)2.9%, and (11)16.2%, respectively. Improvement is required because the line statement's mean value was 3.41 less than the composite mean, indicating that it has a negative impact on the success of aquaculture initiatives in Kirinyaga County, Kenya. Evaluation planning budget and actual evaluation costs should both be more carefully predicted and managed (Muchiri, 2014). Money is needed for the staff, management of the support data system, training initiatives, transportation, and other associated tasks.

The respondents' responses on whether a budget allocation is made for M&E were (15)22.1% indifferent, (48)70.6% in agreement, and (5)7.4% highly in agreement. The fact that the item mean value is 3.85 and the composite mean is 3.64 suggests that the statement in question has a favorable impact on how well aquaculture ventures operate in Kirinyaga County, Kenya.

Last but not least, when it came to the claim that "funds allocated for M&E planned activities is enough," (5)7.4% strongly disagreed, (6)8.8% disagreed, (16)23.5% were indifferent, (28)41.2% agreed, and (13)19.1% highly agreed. The mean was 3.56, which is lower than the composite mean of 3.64. This suggests that this line statement has a negative influence on the dependent variable, necessitating improvement. Money is needed for the staff, management of the support data system, training initiatives, transportation, and other associated tasks.

Outsourcing resource expenses are significant elements that need to be included in the budget. According to the composite mean score of 3.64, it was determined that most respondents agreed with the items used to gauge how Kirinyaga County, Kenya's financial policies affected the success of aquaculture projects. The statements also had composite standard deviation 1.2 indicating responses from respondents had minimal variation. Evaluation planning budget and actual evaluation costs should both be more carefully predicted and managed (Muchiri, 2014). Money is needed for the staff, management of the support data system, training initiatives, transportation, and other associated tasks. Outsourcing resource expenses are significant elements that need to be included in the budget.

In order for M&E operations to effectively use its resources, the budget for M&E must be made plain. One of the interviewed aquaculture project managers said:

*“The capacity to prevent excessive costs and provide the proper amount of the budget to each corresponding necessity is what makes budgeting important in project management.”*

In another interview, project manager stated:

*“The distribution of funds available for project consumption can be determined by budgeting. In project management, budgeting execution is crucial. The project manager is in charge of the project's efficient operation. This guarantees that the effectiveness, standards, timeline, and quality of the project are not missed.”*

Monitoring and evaluation officers interviewed also stated:

*“The measurement of performance against expenditure is aided by budgeting. It makes sure that resources are completely available for the workflow in a company to promote business growth and efficient operation. Budgeting ensures that capital availability is clear and offers projections for spending and revenue.”*

A study by Mandala (2018) showed that performance of road construction projects is strongly influenced by M&E budgetary allocation. It is advised that in order to improve performance of road building projects, project planning and decision-makers actively participate in M&E budgetary allocation. Evaluation planning budget and actual evaluation costs should both be more carefully predicted and managed. Before approving any funding requests, making sure that M&E are included in the budget is a recent priority for donors. Evaluation planning budget and actual evaluation costs should both be more carefully predicted and managed

(Muchiri, 2014). Money is needed for the staff, management of the support data system, training initiatives, transportation, and other associated tasks. Outsourcing resource expenses are significant elements that need to be included in the budget.

#### 4.4.3 Stakeholder Involvement

The study's second goal investigated stakeholder involvement influence on the success of aquaculture projects in Kenya. Respondents to the survey were questioned about their satisfaction with how stakeholder participate in aquaculture projects. Table 4.10 provides the results.

**Table 4.10: Satisfied with stakeholders involvement in aquaculture projects**

	<b>Frequency</b>	<b>Percent</b>
Yes	61	89.7
No	7	10.3
<b>Total</b>	<b>68</b>	<b>100</b>

Findings showed that 89.7% of the respondents were satisfied with the manner in which stakeholders are involved in aquaculture projects while 10.3% were dissatisfied with the manner in which stakeholders are involved in aquaculture projects. These results implies that most respondents were gratified with manner in which stakeholders are involved in aquaculture projects in Kirinyaga County, Kenya. Stakeholder involvement promotes the highest level of stakeholder commitment and participation in the project, which results in good project performance. Incorporating participants in project M&E planning, according to Khan (2017), promotes a sense of project ownership across the board. The effectiveness of farm project planning for M&E is frequently impacted by stakeholder absence. Stakeholder involvement promotes highest level of stakeholder commitment and participation in the project, which results in good project performance.

Table 4.11 provides a list of the outcomes of respondents level of agreement on extent of agreement with statements on stakeholder involvement.

**Table 4.11: Stakeholder Involvement**

	strongly disagree	disagree	neutral	agree	strongly agree	Mean	Std Dev
Every project stakeholder is identified and listed.	(2)2.9%	(6)8.8%	(37)54.4%	(17)25.0%	(6)8.8%	3.28	0.86
Activities involving M&E involve all parties.	(2)2.9%	(10)14.7%	(39)57.4%	(12)17.6%	(5)7.4%	3.12	0.86
Stakeholder involvement is essential for the successful implementation of M&E	(2)2.9%	(7)10.3%	(19)27.9%	(31)45.6%	(9)13.2%	3.56	0.95
Stakeholders are capable and have had M&E training	(6)8.8%	(6)8.8%	(33)48.5%	(19)27.9%	(4)5.9%	3.13	0.98
Stakeholders are familiar with M&E procedures	(0)0.0%	(14)20.6%	(35)51.5%	(11)16.2%	(8)11.8%	3.19	0.90
Stakeholders should be included in projects M&E efforts	(3)4.4%	(4)5.9%	(20)29.4%	(35)51.5%	(6)8.8%	3.54	0.90
<b>Composite mean and standard deviation</b>						<b>3.30</b>	<b>0.91</b>

The study findings show that (17)25.0% and (6)8.8% respondents respectively agreed and strongly agreed that every project stakeholder is identified and listed, (37)54.4% were undecided, (2)2.9% strongly disagreed and (6)8.8% disagreed. The mean score for this item is 3.28, indicating that majority respondents were not sure whether every aquaculture projects in Kirinyaga County, Kenya stakeholder were identified and listed.

The line item on whether activities involving M&E involve all parties, of the respondents (2)2.9% strongly disagreed, (10)14.7% disagreed, (39)57.4% were neutral (12)17.6% agreed, and (5)7.4% agreed strongly. The mean score for this line item, 3.12, is lower than the composite mean score, 3.30. This means that the claim undermines the success of aquaculture initiatives in Kirinyaga County, Kenya, and that consequently, improvement is required. Stephen (2015) stated in an assessment of the results of M&E procedures used by NGOs conducting HIV/AIDS projects that stakeholder involvement encourages sponsors to support the project, which improves its performance.

The study's findings also showed that, according to respondents, stakeholder participation is necessary for the successful implementation of M&E, with 31.46 percent agreeing, 9.2 percent strongly agreeing, 19.79 percent expressing neutrality, and 2.9% and 7.9 percent disagreeing, respectively. The statement's 3.56 average rating, which is higher than the overall mean, implies that it positively affects on the success of fish farming initiatives in

Kirinyaga County. Njuki, Kaaria, Chetsike, and Sanginga (2013), local stakeholders must be included in projects in order to increase outputs, outcomes and results. Mushori (2015) discovered that stakeholders' participation during the M&E phase is crucial for project success and raises project performance. This study evaluates Kenyan aquaculture projects' performance and stakeholder involvement.

The study's results also showed that (19)27.9% and (4)5.9% of respondents, respectively, agreed on and strongly concurred that project stakeholders are capable and had received M&E training, whereas (6)8.8% strongly disagreed, (6)8.8% disagreed, and (33)48.5% of respondents were neutral. There is a need for improvement because the composite mean is 3.30 bigger than the line item mean of 3.13. Moreover, results revealed that, (8)11.8%, (11)16.2%, (35)51.5%, and (14)20.6% respondents respectively agreed, strongly agreed, were neutral, and disagreed that stakeholders are familiar with M&E procedures. There is a need for improvement in order to increase the success of fish farming projects in Kirinyaga county, Kenya, since the statement's mean value was 3.13 less than composite mean value of 3.30. The effectiveness of farm project planning for M&E is frequently impacted by stakeholder absence. Stakeholder involvement promotes highest level of stakeholder commitment and participation in the project, which results in good project performance.

Finally, while a total of (7)10.3% respondents disagreed, (35)51.5% and (6)8.8% of respondents, respectively, agreed that all stakeholder should be included in project M&E efforts. There were (20)29.4% respondents who were neutral. The mean value for this line statement was 3.54. This implies that the claim has a favorable impact on the effectiveness of aquaculture projects in Kirinyaga County, Kenya. Mushori (2015) argued that stakeholders' participation during M&E phase is crucial for project success and raises project performance. This study evaluates Kenyan aquaculture projects' performance and stakeholder involvement

The respondents appeared to generally concur with the claims made regarding the influence of stakeholder involvement on the success of the aquaculture activities in Kirinyaga County, Kenya, as indicated by the composite mean score of 3.0. A composite standard deviation value of 0.91 was also disclosed by the data, indicating that the respondents' replies varied. The effectiveness of farm project planning for M&E is frequently impacted by stakeholder

absence. Stakeholder involvement promotes highest level of stakeholder commitment and participation in the project, which results in good project performance. These results were in agreement with argument of the interviewed respondents who suggested that the promoting the highest level of stakeholder commitment and involvement in the project leads to good project performance. Interviewed project manager stated that:

*“Stakeholder involvement in monitoring and assessment is crucial because it keeps projects on track, frequently assures early problem detection, lowers the risk of significant cost overruns or time delays, and ensures project specifications are met”*

Another interviewed monitoring and evaluation officer stated:

*“The performance of agricultural projects is greatly improved when stakeholders are included in the planning for M&E.”*

Project coordinator interviewed stated:

*“Stakeholder involvement encourages sponsors to support the project, which improves its performance. The local stakeholders must be included in aquaculture projects in order to increase outputs, outcomes and results.”*

In another interview, project officer seconded:

*“Stakeholders can develop a shared understanding of the issues affecting the community or project with the aid of participatory monitoring (their causes, magnitude, effects and implications). The identification of solutions is made easier as a result. Because they were developed in response to a current issue, these solutions are more likely to be suitable.”*

These study results agrees with findings by Archana, Karmacharya, Rashmi, Abhinav, Meghnath, Natalia, and Rajendra, (2019), who argue that stakeholder involvement affects project goals during monitoring phase, allocation of resources, task specification and project success. The monitoring process should help project stakeholders identify different potential project benefits, along with ways to enhance tracking and enhancing project achievements, obstacles, and emerging possibilities for future making plans. Participation of stakeholders in the project's monitoring phase boosts its chances of success. Stakeholder participation in project monitoring and reporting aids in identifying challenges and problems with initiatives.



#### 4.4.4 Staff Capacity

The third study goal examined staff capacity influence on success of aquaculture project. The study participants opinions results on whether satisfied with monitoring and evaluation practices training are shown in Table 4.12.

**Table 4.12: Satisfied with monitoring and evaluation practices training**

	<b>Frequency</b>	<b>Percent</b>
Yes	58	85.3
No	10	14.7
<b>Total</b>	<b>68</b>	<b>100</b>

The majority 85.3% respondents agreed and were satisfied that training of project team in monitoring and evaluation practices in aquaculture project aid in project success whilst only 14.7% disagreed. Those respondents agreed stated that to implement an M&E approach that works, management must choose candidates with appropriate abilities and regularly enhance those candidates' competencies and others agreed that regular training keeps M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities. According to Muiga (2015), they should regularly engage in rigorous capacity building and on-site training, which will immediately improve the abilities of M&E staff members in the field. The M&E quality team will rise when aquaculture projects have a strong M&E team with the necessary abilities, full-time training, and dedication to M&E, which will ultimately result in the success of the aquaculture project and high project performance. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities. Agricultural projects need a capable M&E team to function efficiently. The M&E team must possess the requisite skills and capacity to participate in M&E.

When asked to score their degree of agreement with comments regarding how staff capability affects performance of fish farming projects in Kirinyaga County, Kenya, study participants responses as shown in Table 4.13.

**Table 4.13: Staff Capacity**

	strongly disagree	disagree	neutral	agree	strongly agree	Mean	Std Dev
Staff members have taken M&E short courses	(2)2.9%	(5)7.4%	(19)27.9%	(31)45.6%	(11)16.2%	3.65	0.94
The project team has received necessary M&E training	(2)2.9%	(10)14.7%	(11)16.2%	(32)47.1%	(13)19.1%	3.65	1.05
The project team demonstrates their mastery of M&E	(2)2.9%	(9)13.2%	(12)17.6%	(24)35.3%	(21)30.9%	3.78	1.12
A key driver of how M&E is conducted is staff training	(7)10.3%	(12)17.6%	(13)19.1%	(18)26.5%	(18)26.5%	3.41	1.33
<b>Average</b>						<b>3.62</b>	<b>1.11</b>

The results of the survey showed that, while 19.27.9% of respondents were uncertain, 5.7.4% disagreed, and 2.9% strongly disagreed, 31.45.6% of participants agreed and 11.16.2% of participants strongly agreed that employees had taken M&E short courses. The composite mean value of 3.65 is greater than this line statement's mean value of 3.65, indicating that it may have a more favorable effect on the performance of aquaculture businesses in Kirinyaga County, Kenya. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities. Agricultural projects need a capable M&E team to function efficiently. The M&E team must possess the requisite skills and capacity to participate in M&E.

According to the study's findings, project team has received the appropriate M&E training. However, (2)2.9% strongly disagreed, (10)14.7% disagreed, and (11)16.2% of respondents were unsure, whereas (32)47.1% and (13)19.1% respondents, respectively, agreed and strongly agreed. Given that the statement's mean item score of 3.65 is higher than the composite mean of 3.62, it is implied that the statement positively affects the success of aquaculture ventures in Kirinyaga County, Kenya. To implement an M&E approach that works, management must carefully choose candidates with the appropriate abilities and regularly enhance those candidates' competencies. Adoption of M&E practices should heavily spend in M&E staff training and development.

The majority of respondents (24)35.3%, (21)30.9%, and (2)2.9% strongly agreed that the project team exhibits their mastery of M&E; (12)17.6% disagreed, (9)13.2%, and (2)2.9% neither agreed nor strongly disagreed. The line's mean value of 3.78, which is higher than the

composite mean of 3.62, suggests that it has a positive impact on how well aquaculture ventures in Kirinyaga County, Kenya, perform. Maphunye (2018) study on the issues of human capacity in the process, this would help to build the team's capacity. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities

According to the composite mean value of 3.62, the majority of respondents agreed with the assertions made about how personnel capability affects the success of aquaculture operations in Kirinyaga County, Kenya. The composite standard deviation score of 1.33 also demonstrated that there was little variety in the responses. Management must carefully select people with the necessary skills and continuously improve the capabilities of those candidates in order to adopt an M&E approach that is effective. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities. Agricultural projects need a capable M&E team to function efficiently. The M&E team must possess the requisite skills and capacity to participate in M&E.

Spending on M&E personnel training and development should be prioritized when adopting M&E practices. Using Maphunye's (2018) research on the topic of human capacity in the process, the team's capacity might be increased. Regular training improves the M&E personnel's ability to handle M&E data by keeping them abreast of any new M&E breakthroughs. These findings were in agreement with argument of interviewed project coordinator, aquaculture project managers and monitoring and evaluation officers who agreed that adoption of M&E practices should heavily spend in M&E staff training and development.

Project manager interviewed said:

*“Project M&E Officers frequently play the function of developing the Monitoring and Evaluation (M&E) skills of project personnel and partners. You must assist project personnel in acquiring the necessary abilities, knowledge, attitudes, and behaviors for them to be successful in their given roles”*

One of the respondent interviewed stated that;

*“Regular involving staffs in rigorous capacity building and on-site training, help immediately improve the abilities of M&E staff members who are stationed in the field.”*

The project coordination officer interviewed stated:

*“The quality of M&E team will rise when aquaculture projects have a strong M&E team with the necessary abilities, full-time training, and dedication to M&E, which will ultimately result in the success of the aquaculture project and high project performance.”*

The findings are consistent with those of Muiga (2015), whose research showed that routinely involving project stakeholders in intensive capacity building and on-site training enhances their skillsets. A competent M&E team is necessary for agricultural projects to operate effectively, according to Wanja (2017). Adoption of M&E practices should heavily spend in M&E staff training and development. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities. Agricultural projects need a capable M&E team to function efficiently. The M&E team must possess the requisite skills and capacity to participate in M&E. M&E capacity development for employees involves a wide range of tasks, including as job placements, training programs, mentorship, and classroom instruction (Muiga, 2015). The success of the farmed project and excellent execution of the project will eventually be the outcome of a strong M&E team for fishing projects that has the essential skills, full-time classroom instruction, and dedication to M&E.

#### **4.4.5 Planning Process**

The study's final goal evaluated relationship between aquaculture project planning and performance in Kenya's Kirinyaga County. Table 4.14 displays the responses to the question of whether the study participants were happy with the planning process for aquaculture projects.

**Table 4.14: Whether satisfied with planning process aquaculture projects**

	<b>Frequency</b>	<b>Percent</b>
Yes	40	58.8
No	28	41.2
<b>Total</b>	<b>68</b>	<b>100</b>

In Kirinyaga County, Kenya, the findings showed that 58.8% of respondents agreed with the assertion that that they had been pleased with the planning process for fish farming projects,

while only 41.2% of respondents had other views. These results implies that respondents were satisfied with planning process aquaculture projects in Kirinyaga County, Kenya. It is essential to plan for M&E at the beginning of every project since it provides a detailed road map for the project's goals. Performance of aquaculture projects is effective when M&E planning is of the highest caliber (Ongondo, 2017). The project assessment plan includes outlines the evaluation-related issues that will be addressed. The metrics to be tracked, the people in charge of collecting them, the instruments and forms. Regardless of the project's size, monitoring and assessment are essential since they reveal areas that need to be improved.

Table 4.15 provides results of respondents' levels of agreement about the impact of the planning process on the success of aquaculture projects in Kirinyaga County, Kenya.

**Table 4.15: Planning Process**

	strongly disagree	disagree	neutral	agree	strongly agree	Mean	Std Dev
There are monitoring and assessment strategies for successful project execution	(7)10.3%	(9)13.2%	(5)7.4%	(27)39.7%	(20)29.4%	3.65	1.31
Activities are assigned and will be carried out as the project is implemented	(0)0.0%	(2)2.9%	(8)11.8%	(16)23.5%	(42)61.8%	4.44	0.82
Time and resources are allocated for a variety of monitoring and evaluation tasks	(0)0.0%	(6)8.8%	(10)14.7%	(22)32.4%	(30)44.1%	4.12	0.97
Reporting schedules for implementation progress are available	(5)7.4%	(2)2.9%	(14)20.6%	(18)26.5%	(29)42.6%	3.94	1.20
<b>Composite mean and standard deviation</b>						<b>4.04</b>	<b>1.07</b>

The study findings revealed that (27)39.7% respondents agreed that there are monitoring and assessment strategies for successful execution of aquaculture project, (20)29.4%strongly agreed, (7)10.3% disagreed, (9)13.2% strongly disagreed while only (5)7.4% were neutral. The composite mean was 4.04, whereas the line item's mean value was 3.65. This suggests that the line item has a negative impact on success of aquaculture operations in Kirinyaga County, Kenya, necessitating improvement.

The study findings also revealed that (2)2.9%, (8)11.8%, (16)23.5%, and (42)61.8% respondents respectively disagreed, were indifferent, agreed, and agreed that the activities are assigned and will be carried out as the project is implemented. The statement mean is 4.44, which is more compared to composite mean of 4.04, indicating that the statement has a favorable impact on how well aquaculture projects in Kirinyaga County, Kenya, are performing. The project's progress and how well it is producing the anticipated outputs and outcomes are to be assessed and reported using the M&E plan's objectives. Planning for M&E at the outset of any project is crucial since it gives the project's objectives a thorough roadmap.

A majority of respondents (22)32.4% and (30)44.1% agreed and strongly agreed that the opportunity and means are allocated for a variety of M&E tasks, while (10)14.7% of respondents were unsure and (6.2%) disagreed. The remaining respondents (10)14.7%) were not sure. The claim that the composite mean of 4.04 and the mean value of 4.12 respectively suggests a positive impact on the long-term achievement of aquaculture firms in Kirinyaga County, Kenya. High-quality M&E planning results in successful aquaculture project performance (Ongondo, 2017).

Finally, among the study participants, (18)26.5% and (29)42.6% concurred with and strongly concurred that reporting schedules for progress in implementation are available, while (14)20.6% were not in agreement or disagreement and (5)7.4% and (2)2.9% disagreed and strongly disagreed, respectively. The statement's mean value was 3.94 points lower than the composite mean, indicating that it has a detrimental effect on the success of aquaculture projects in Kirinyaga County, Kenya. According to Stephen (2015), carefully scheduling actions from one phase to the next throughout M&E planning makes it easier to achieve the specified goals.

The majority of respondents, as indicated by the aggregate mean of 4.04, agreed with the assertions addressing the influence of the planning process on the accomplishment of fish farming projects in Kirinyaga County, Kenya. The composite SD score of 1.07 suggests that there was little variance in the replies provided by the respondents. Careful timing of activities from one phase to the next during M&E planning facilitates the attainment of the stated objectives.

These recommendations are in line with those made by the majority of project coordinators, aquaculture project managers, and monitoring and evaluation officers who were interviewed. They mentioned that planning M&E in aquaculture projects includes organizing project operations to enable monitoring and assessment as well as preserving a log frame of the project's objectives as well as key performance indicators.

Interviewed aquaculture project managers commented:

*“Planning for M&E of the aquaculture projects at the outset of any project is crucial since it gives the project's objectives a thorough roadmap, and improved quality M&E planning results in successful aquaculture project performance”*

The interviewed monitoring and evaluation officers said:

*“The plan for fish farming projects helps to specify the evaluation issues that will be handled through project assessment. Therefore, without the adoption of M&E plans, many M&E systems would fail because of the lack of attention to detail during the planning stage.”*

In another interview, the project coordinator stated:

*“Planning for aquaculture project activities ahead of time makes it simple to stay on schedule, it encourages the success of health initiatives and effective project execution. Scheduling activities also makes it simpler for the fishing project employees to monitor and control the project execution by enabling them to track their operations, learn from their mistakes, and enhance their services in accordance with the project activity schedule to ensure high project performance.”*

These results are in line with a research by Ongondo (2017), which found that planning for M&E from the commencement of any project is vital since it provides the project's objectives with a detailed roadmap. Performance of aquaculture projects is effective when M&E planning is of the highest caliber. Insufficient allocation of resources for M&E operations is the root cause of low project productivity, Sanganyi's (2016) study on the usage of M&E procedures in construction projects. It should be emphasized that when M&E resources are limited, health project performance declines. Planning ahead makes it easy to keep on schedule, promotes the success of health efforts, and ensures that projects are carried out successfully.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The study's goal was to evaluate the success of aquaculture programs in Kenya, with a particular focus on NARDTC in Kirinyaga County. This section provides an overview of the study's descriptive analysis results. The chapter presents recommendations for more research as well as the findings and conclusions of the study.

#### 5.2 Summary of the findings

The summary of the findings of which are presented hereafter.

##### 5.2.1 Budgetary practices and Performance of Aquaculture Projects

The majority of survey participants, as indicated by the composite mean value of 3.64, only slightly agreed with the criteria used to evaluate how budgetary practices affected the effectiveness of aquaculture programs in Kirinyaga County, Kenya, according to the descriptive research findings. These findings suggest that good budgeting procedures have a positive impact on aquaculture projects in Kirinyaga County, Kenya. The statements also had a composite SD of 1.2, showing that respondents' opinions on how budgetary procedures affected the success of aquaculture operations in Kirinyaga County, Kenya, varied only slightly. Budget processes provide the opportunity to determine whether the project can be completed within the budget given. In order for M&E operations to effectively use its resources, the financial plan for M&E must be made plain.

These findings confirm Mandala's (2018) claim that the performance of a project is significantly impacted by the budgetary allocation for M&E. By deciding on the objectives for your budget, you can arrange the project's many components. The M&E compared to the entire project budget to determine how well monitoring and evaluation are employed in project management (Ika, Diallo, & Thuillier, 2018). Estimating and controlling the evaluation planning budget as well as the actual evaluation costs need to receive more focus.



### **5.2.2 Stakeholder Involvement and Performance of Aquaculture Projects**

According to the descriptive data, majority of research participants were neutral with the statement used to gauge how well performance of aquaculture projects in Kirinyaga County, Kenya scored 3.0 on the composite mean scale, which indicates that stakeholders are involved. A composite standard deviation value of 0.91 was also disclosed by the data, indicating that the respondents' replies varied. The monitoring process should help project stakeholders identify different potential project benefits, along with ways to enhance tracking and enhancing project achievements, obstacles, and emerging possibilities for future making plans.

These findings agrees with Archana, Karmacharya, Rashmi, Abhinav, Meghnath, Natalia, and Rajendra (2019), who contend that stakeholder involvement influences project goals throughout the monitoring phase, resource allocation, task specification, and project success. Participating in monitoring and evaluation projects with stakeholders appears to help build confidence and lessen community opposition to project implementation, which strengthens relationships amongst stakeholders. The effectiveness of farm project planning for M&E is frequently impacted by stakeholder absence. Stakeholder involvement promotes highest level of stakeholder commitment and participation in the project, which results in good project performance. Participation of stakeholders in the project's monitoring phase boosts its chances of success. Stakeholder participation in project monitoring and reporting aids in identifying challenges and problems with initiatives.

### **5.2.3 Staff Capacity and Performance of Aquaculture Projects**

The study majority respondents were satisfied that training of project team in monitoring and evaluation practices in aquaculture project aid in project success. Those respondents agreed stated that to implement an M&E approach that works, management must choose candidates with appropriate abilities and regularly enhance those candidates' competencies and others agreed that regular training keeps. These results supported the claims made by the project coordinator, aquaculture project managers, and monitoring and evaluation officers who were interviewed. They all agreed that investing extensively in the training and development of M&E staff should occur before adopting M&E techniques.

The findings are consistent with those of Muiga (2015), whose research showed that routinely involving project stakeholders in intensive capacity building and onsite instruction enhances their skillsets. According to Wanja (2017), successful agricultural initiatives require an effective M&E team. The M&E staff must be capable of and have the necessary expertise for M&E. Management must carefully select people with the necessary skills and continuously improve the capabilities of those candidates in order to adopt an M&E approach that is effective. Maphunye (2018) research on the topic of human capacity in the process, the team's capacity might be increased. Regular training improves the M&E personnel's ability to handle M&E data by keeping them abreast of any new M&E breakthroughs.

#### **5.2.4 Planning Process and Performance of Aquaculture Projects**

According to the descriptive findings, most respondents felt that the planning procedure for fisheries projects in Kirinyaga County was satisfactory. A composite mean value of an overall average of 4.04 indicating most participants of research participants agreed with the assertions used to assess how the planning process affected the success of aquaculture projects in Kirinyaga County, Kenya. This suggests that the planning method for aquaculture projects has a beneficial impact on how well they perform in Kirinyaga County, Kenya. These suggestions agree with those made by the vast majority of project coordinators, aquaculture project managers and monitoring and evaluation officers who were interviewed. They mentioned that planning monitoring and evaluation in aquaculture projects entails scheduling project operations to enable monitoring and assessment.

These results are in line with a research by Ongondo (2017), which found that planning for M&E from the commencement of any project is vital since it provides the project's objectives with a detailed roadmap. Performance of aquaculture projects is effective when M&E planning is of the highest caliber. Planning ahead makes it easy to keep on schedule, promotes the success of health efforts, and ensures that projects are carried out successfully.

### **5.3 Conclusion**

This study concludes that, budgetary procedures have a favorable impact on how well aquaculture projects work in Kirinyaga County, Kenya. Better budgetary practices, such as ensuring sufficient money allocation for aquaculture projects, early release of project funds, and availability of budget allocation for M&E, can improve success of aquaculture projects in Kirinyaga County, Kenya. Additionally, the study found that proper funding for M&E efforts increases the effectiveness of aquaculture operations in Kirinyaga County, Kenya.

The study came to the further conclusion that the aquaculture initiatives performance in Kirinyaga, Kenya, is positively impacted by stakeholder involvement. The performance of aquaculture operations in Kirinyaga County, Kenya, is improved by improved stakeholder involvement techniques, such as making sure that every project stakeholder is identified and listed, making sure that M&E activities involve all parties, including stakeholders in effective implementation of M&E, and making sure that stakeholders are capable and have received M&E training. The study went on to reach the further conclusion that ensuring stakeholders are aware of M&E protocols and engaging stakeholders in project M&E activities will improve the efficacy of aquaculture operations throughout Kirinyaga County, Kenya.

The study came to the additional conclusion that practices related to personnel capacity had a favorable impact on the effectiveness of aquaculture operations in Kirinyaga County, Kenya. Enhancement in staff capacity practices such as ensuring staff members undertake M&E short courses, ensuring project team receive necessary M&E training, making sure that project team demonstrates mastery of M&E, and conducting staff training will results to improved performance of aquaculture operations in Kirinyaga County, Kenya. Regular training keeps the M&E personnel informed of any new M&E advancements, enhancing their M&E data handling abilities. Agricultural projects need a capable M&E team to function efficiently. The M&E team must possess the requisite skills and capacity to participate in M&E.

According to study results, planning process methodologies have a favorable impact on the success of aquaculture projects in Kirinyaga County, Kenya. The efficiency and effectiveness of aquaculture projects in Kirinyaga will improve as planning process practices such as making sure there are monitoring and assessment strategies for effective project execution, activities are assigned to be carried out as the project is implemented, time and resources are

allocated for a variety of evaluation and monitoring tasks, and reporting schedules for implementation progress are available.

#### **5. 4 Recommendations**

Based on its results, the paper recommends the following changes to the tracking and assessing processes and the efficacy of aquaculture projects in Kirinyaga County, Kenya. The section distributes the study's suggestions to a number of recipients, including decision-makers in government, Kirinyaga County's NARDTC administration, and other scholars and researchers. These suggestions are

The study suggests that strengthening financial allocation procedures be considered in order for improved aquaculture projects performance. As an illustration, Kirinyaga County decision-makers, funders, and management of NARDTC should ensure that aquaculture projects obtain appropriate money, appropriate project funding reimbursement, budget allocation to M&E, and adequate funding for M&E operations.

The study also recommends that policymakers and the NARDTC management in Kirinyaga County prioritize strengthening stakeholder involvement strategies, including ensuring that every stakeholder involved in the project is identified and listed, that all parties take part in M&E activities, that stakeholders are capable and have obtained M&E training, that participants are familiar with M&E procedures, and that interested parties are included in assignments M&E efforts.

Another study recommendation is that in order for aquaculture projects in Kirinyaga County, Kenya, to perform better and become more sustainable, staff capacity practices need to receive more attention. For example, staff members should take M&E short courses, the project team should receive the necessary M&E training, and staff should be trained in M&E procedures. The skills of M&E staff members who are based in the field are immediately enhanced by routinely including project stakeholders in demanding capacity building and on-site training. Without a knowledgeable M&E personnel, the agricultural projects cannot operate effectively. The M&E team must possess the requisite skills and capacity to participate in M&E.

The study's final recommendation is that funding be allocated to the Kirinyaga County NARDTC management's planning process techniques in order to ensure the sustainability of the aquaculture project. Making sure there are assessment and monitoring strategies for

successful project execution, making sure that activities are assigned and completed as the project is implemented, making sure that time and resources are allocated for a variety of monitoring and evaluation tasks, and making sure that reporting schedules for implementation progress are available are some of the planning process strategies that need to be improved.

### **5.5 Suggestions for Further Study**

Future research can focus on the effectiveness of initiatives other aquaculture operations, such as beekeeping and vegetable programs. In this study, the academic achievement of aquaculture projects in Kenya was examined, with a focus on NARDTC, Kirinyaga County.

Other than the behaviors examined in this study, future research should focus on other M&E practices that affect the performance of fish farming enterprises in Kenya. In the current study, Kirinyaga County's NARDTC was used as an example to analyze the effect of M&E techniques on the performance of fish farming operations in Kenya.

Future research should be done in places other than Kirinyaga County to examine the monitoring and evaluation processes and results of aquaculture initiatives in Kenya..

## REFERENCES

- Willer, D. F., & Aldridge, D. C. (2019). Microencapsulated diets to improve bivalve shellfish aquaculture for global food security. *Global Food Security*, 23, 64-73.
- Ali, H., Upraity, V., Gurung, S., Dhar, G. C., & Belton, B. (2018). Making sense of the market: Assessing the participatory market chain approach to aquaculture value chain development in Nepal and Bangladesh. *Aquaculture*, 493, 395-405.
- Bett, K. A. (2018). *Influence of project monitoring and evaluation on the performance of youth funded projects: A case of Moiben Sub-county Uasin Gishu County, Kenya* (Doctoral dissertation).
- Alex, A. J. (2016). Assessment of performance of monitoring and evaluation systems at caritas torit, in south Sudan. *Arts and Social science*.
- Mrangu, R. G. (2018). *Assessment of the Factors Affecting Sustainability of Community Based Projects in Rural Areas: A Case of Bagamoyo District, Tanzania* (Doctoral dissertation, The Open University of Tanzania).
- Nyakundi, A. A. (2014). *Factors influencing implementation of Monitoring and evaluation processes on donor Funded projects; a case of gruppo per le Relazioni transculturali-grt project in Nairobi, Kenya* (Doctoral dissertation).
- Micah, N. J., & Luketero, S. W. (2017). Monitoring and evaluation systems and performance of non-governmental based maternal health projects in Bungoma South Sub-County, Kenya. *European Scientific Journal*, 13(23), 11-38.
- Shihemi, R. (2016). *Influence of monitoring and evaluation tools on projects performance of building and construction projects in Kenyan public universities: A case of the University of Nairobi* (Doctoral dissertation, University Of Nairobi).
- Castelnovo, W. (2018). A stakeholder based approach to public value. In *Proceedings*

- of the 13th European Conference on eGovernment* (pp. 94-101).
- Muchelule, Y. W. (2018). *Influence of monitoring practices on projects performance of Kenya state corporations* (Doctoral dissertation, JKUAT-COHRED).
- Bennett, S., Singh, S., Ozawa, S., Tran, N., & Kang, J. S. (2018). Sustainability of donor programs: evaluating and informing the transition of a large HIV prevention program in India to local ownership. *Global health action*, 4(1), 7360.
- Damascene, J. (2019). *The contribution of Monitoring Practices on NGOs Performance in Humanitarian Emergency Responses, a case study of Save the Children Mahama Camp Rwanda 2015-2019*.
- Defontaine, C. (2018). Exploiting the full potential of new technologies for data collection, monitoring, and conflict prevention. *Development for Peace*.
- Dobi, B. A. (2019). *Factors Influencing Adoption Of Monitoring And Evaluation System For Project Management Among Ngos In Rarieda District, Siaya County, Kenya. Nairobi, Kenya*
- Singh, K., Chandurkar, D., & Dutt, V. (2017). A practitioners' manual on monitoring and evaluation of development projects.
- Gitau, J. (2020). *Planning for Agro-industries in Rural Communities: the Case of Kinangop Sub-county, Nyandarua County* (Doctoral dissertation, University of Nairobi).
- Hubert, N., & Mulyungi, D. (2018). Influence Of Monitoring And Evaluation Planning On Project Performance In Rwanda: A Case Of Selected Non Governmental Organisations In Gasabo District. *European Journal of Business and Strategic Management*, 3(8), 1-16
- Idoro, G. (2019). Influence of the monitoring and evaluation practices of indigenous

- and expatriate Nigerian contractors on project outcome. *Journal of Construction in Developing Countries*
- IFAD. (2016). Local Initiative Support Project Evaluation Report. Rome: *Office of the Evaluation Studies*
- Ika, L. A., Diallo, A., & Thuillier, D. (2018). Project Management in the international development industry: the project coordinator's perspective. *International Journal of Managing Projects in Business*, 3(1), 61-93.
- Japeth, M. N., & Luketero, D. S. (2017). *Influence of Monitoring and Evaluation Practices in Non Governmental Organisation: A case of Maternal Health Projects in Bungoma South Sub-County, Kenya*
- Edwards, P., Zhang, W., Belton, B., & Little, D. C. (2019). Misunderstandings, myths and mantras in aquaculture: its contribution to world food supplies has been systematically over reported. *Marine Policy*, 106, 103547.
- Xu, Z., Primavera, J. H., de la Pena, L. D., Pettit, P., Belak, J., & Alcivar-Warren, A. (2015). Genetic diversity of wild and cultured black tiger shrimp (*Penaeus monodon*) in the Philippines using microsatellites. *Aquaculture*, 199(1-2), 13-40.
- Maphunye, M. (2018). Human capacity challenges in the implementation of a Monitoring and Evaluation. *University of the Witwatersrand Graduate School of Public & Development Management*
- Maina, W. M. (2016). *Influence of monitoring and evaluation factors on performance of co-operative societies in Kenya. A case of Nairobi County.*
- Marsden, P., Caffrey, M., & McCaffery, j. (2017). Human resources management assessment approach.



- Mavuti, B. M., Kisung'u, T. M., & Oyoo, J. J. (2019). Effect of project management practices on implementation of Kenya Ports Authority
- Mibey, H. K. (2016). Factors affecting Implementation of Monitoring and Evaluation Programs in Kazi kwa Vijana Project by government ministries in Kakamega Central District, Kenya (Unpublished master's thesis).
- Mthethwa, R., & Jili, N. (2016). Challenges in implementing monitoring and evaluation (M&E): the case of the Mfolozi Municipality. *African Journal of Public Affairs*, 9(4), 102-113.
- Nduta, N. N. (2018). Monitoring and Evaluation Strategies, Management Support and Performance of Dairy Primary Cooperative Societies in Murang'a County, Kenya.
- Ndung'u, B. (2018). Factors Influencing Implementation Of Monitoring And Evaluation Practices In County Government Construction Projects In Kenya: A Case Of Nyeri County. Nairobi.
- Njenga, A. G. (2018). Influence of Monitoring and Evaluation Practices in Non Governmental Organisation: A case of Maternal Health Projects in Bungoma South Sub-County, Kenya. *European Scientific Journal*, 13(23). doi:10.19044/esj.2017.v13n23p11
- Njeri, J. W., & Omwenga, J. Q. (2019, April 3). Influence of Monitoring and Evaluation Practices on Sustainable Projects – A Case Study of The National Aids Control Council. *Strategic Journals*, 6(2), 132 - 152.
- Njuguna, P. K. (2016). *Factors Influencing the Performance of Monitoring And Evaluation Systems in Non-Governmental Organisations Funded Educational Projects in Murang'A County, Kenya. Nairobi, Kenya*
- Obunga, R. O. (2017). An Assessment of Monitoring and Evaluation Systems of Plan Kenya: a Case Study of Young Health Programme and Adolescent Girls

Initiative Kenya, Nairobi. Nairobi

Ochieng, F. O., Chepkuto, P. P., Tubey, D. R., & Kuto, L. Y. (2017). Effectiveness of monitoring and evaluation of CDF projects in Kenya. A case of. *International Journal of Arts and Commerce*, 1(6), 1-9.

Toscano, S. (2019). Exploring the History and Challenges of Monitoring and Evaluation in International Nongovernmental Organizations: Complemented by Intern Experience at Save the Children USA

Wanja, P. (2017). *Factors Influencing the Performance of Projects in Ngos Funded by Wfp in Kenya: a Case of Action Against Hunger*. Nairobi. Retrieved from erepository.uonbi.ac.ke.

Wambua, C. M. (2019). Monitoring and Evaluation Practices and Perfomance of County Funded Education Projects in Makueni County, Kenya

Mugo, N. J. (2017). *Monitoring And Evaluation Practices, Ethics And Sustainability Of Agricultural Food Crop Projects In Nyeri County, Kenya*

## APPENDICES

### **Appendix I: Introduction Letter**

Dear study participants,

#### **RE: ACADEMIC RESEARCH**

I'm conducting research for a master's degree on “*monitoring and evaluation practices and performance of aquaculture projects in Kenya: a case of NARDTC, Kirinnyanga County*”.

This partially satisfies the requirements for the Master of Arts in Project Planning and Management degree from the University of Nairobi. Complete the entire assessment that is provided, as requested. All questionnaire responses will be kept in strict secrecy and solely utilized to advance the objectives of this dissertation.

A copy of the final report will be provided to survey respondents upon request.

Since maintaining your identity is crucial, omitting your name from the questionnaire is requested.

my sincere appreciation,

**Delphine Njuambo Chenyi**

## Appendix II: Questionnaire

Thank you, Respondents. The goal of this survey is to collect information on the effectiveness of aquaculture programs in Kenya, with a focus on NARDTC's Kirinyaga County case study. Information given will be kept confidential and used only for academic purposes. Please answer each question on the questionnaire in private using the areas given.

### PART A: Respondents Background Information

(Tick (✓) where applicable)

1. Please pick your gender

a) Male ( )

a) Female ( )

2. Kindly indicate you age bracket

a) Between 19-30 years

c) Between 41- 50 years

b) Between 31-40 years

d) Above 50 years

3. Please indicate your level of education

a) Postgraduate

b) Undergraduate

c) diploma

d) certificate

4. For how long have you worked at National Aquaculture Research Development and Training Centre?

a) 3-6 years

b) 6-8 years

c) 8- 10years

d) More than 10 years

**Section B: Performance of aquaculture projects in Kenya**

1. Do you believe that a successful monitoring and evaluation practices ensures aquaculture projects succeed by delivering desired results of quality and on schedule and within the allocated budget?

- a) Yes ( )
- b) No ( )

If yes in above, please give two benefits of successful monitoring and evaluation practices on aquaculture projects

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.....

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2. How much do you agree with the points below regarding how aquaculture initiatives in Kenya are performing? Apply the scale: Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agreement = 4, and strongly Agree = 5.

Statements	Rating				
	1	2	3	4	5
Increased number of agriculture projects completed within the county					
Increased access to agriculture products by farmers					
Aquaculture projects are achieved within specification, i.e. time and budget					
Increased trainings for the local on aquaculture practice					
The aquaculture projects have been accepted by beneficiary					

### Section C: Budgetary Practices

1. Do you agree that the funds allocated for M&E of aquaculture projects is enough
  - a) Yes ( )
  - b) No ( )
2. To what extent do you agree with following statements on budgetary practices and performance of aquaculture projects at National Aquaculture Research Development and Training Centre? Use the scale: 1. Strongly Disagree, 2. Disagree, 3. Neutral, 4. Agree, and 5. Strongly Agree.

Statements	Rating				
	1	2	3	4	5
Aquaculture projects are allocated adequate amount					
There timely disbursement of project funds					
There is provision of budget allocation to M&E					
The amount allocated for M&E activities is enough					

**Section D: Stakeholder Involvement**

1. Are you satisfied with the manner in which stakeholders are involved in aquaculture projects?

a) Yes ( )

b) No ( )

No, give the reasons of your disagreement.

.....

.....

.....

.....

2. How much do you agree with the comments below regarding stakeholder involvement? Apply the scale: 1. Strongly Disagree 2. Disagree, 3. Neutral; 4. Consent; and 5. Strongly Consent.

Statements	Rating				
	1	2	3	4	5
Every project stakeholder is identified and listed.					
Activities involving M&E involve all parties.					
Stakeholder participation is necessary for the efficient implementation of M&E					
Stakeholders are capable and have had M&E training					
Stakeholders are familiar with M&E procedures					
Stakeholders should be included in projects M&E efforts					

**Section E: Staff Capacity**

1. Are you satisfied that training of project team in monitoring and evaluation practices in aquaculture project aid in project success

- a) Yes ( ) b) No ( )

If yes, give the reasons of your agreement.

.....  
 .....

2. How much do you agree with the comments below regarding staff capacity? Apply the scale: 1. Strongly Disagree 3. Neutral; 4. Consent; and 5. Strongly Consent.

Statements	Rating				
	1	2	3	4	5
Staff members have taken M&E short courses					
The project team has received necessary M&E training					
The project team demonstrates their mastery of M&E					
A key driver of how M&E is conducted is staff training					

**Section F: Planning Process**

3. Are you satisfied with planning process aquaculture projects?

- a) Yes ( )  
 b) No ( )

If the answer to question above is yes, give the reasons of your agreement.

.....  
 .....

4. How much do you agree with the comments below regarding p? Apply the scale: 1. Disagree, 2. Strongly Disagree 3. Neutral; 4. Consent; and 5. Strongly Consent.

Statements	Rating				
	1	2	3	4	5
There are monitoring and assessment strategies for successful project execution					
Activities are assigned and will be carried out as the project is implemented					
Time and resources are allocated for a variety of monitoring and evaluation tasks					
Reporting schedules for implementation progress are available					



### **APPENDIX III: Interview Schedule**

- i. What are some methods of financial allocation that can help Kenyan aquaculture projects operate better?
- ii. How do Kenyan aquaculture initiatives fare in relation to stakeholder involvement?
- iii. How much do technical skills affect how well aquaculture initiatives in Kenya perform?
- iv. How do aquaculture projects in Kenya perform in relation to the planning process?

**THANK YOU FOR YOUR PARTICIPATION.**