

**MONITORING AND EVALUATION TOOLS ON PERFORMANCE OF  
SMALL-SCALE DAIRY GOATS PROJECTS IN KITUI COUNTY,  
KENYA**

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## **DECLARATION**

This research project is my original work and has not been presented in any other learning institution.



**DATE 15th Nov 2021**

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**L50/28707/2019**

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



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## **DEDICATION**

I dedicate this work to important people around me that give me the energy and willingness to keep pushing on. My lovely son Myles for imparting the urge to pursue education to the highest level. Finally, to my most caring Mother Janet Kimeu, Sister Angela Kimeu, and my workmate David Ngunjiri for the unending support in my studies. Above all, God Almighty for everything.

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## **ABBREVIATIONS AND ACRONYMS**

DLPO – District Livestock Production Officer

FAO – Food and Agriculture Organization

M&E – Monitoring and Evaluation

NDAIS- National Dairy Animal Improvement Scheme

NGO - Non-Governmental Organization

SPSS - Statistical Package for the Social Science

UNDP - United Nations Development Programs

LFA - Logical Framework Approach

## ABSTRACT

Over the years, practicing dairy goat farming has emerged as a profitable venture, particularly for small-scale farmers. Goat's milk demand is currently on the upswing and a perfect alternative to cow milk due to its nutritional value. Goat rearing is very beneficial not just for milk production but also for goat meat, acts as a delicacy for many households. For the small-scale farmers to maximize the performance production of dairy goats there is a need to monitor and evaluate the project until it breaks even continually. In this study, tools like logical framework, Gantt charts, routine monitoring, and project indicators were used to evaluate, determine, and establish how such tools influence this project's performance. This observation brings a gap for further studies on monitoring and evaluation tools by farmers venturing into small dairy goat farming and trying to reduce this gap. Objectives considered in this study are to examine the extent to which the use of Logical Framework influences the performance of small-scale dairy goat farming project, determine how the use of Gantt charts in scheduling influence the performance of small-scale dairy goat farming projects, establish how routine monitoring influence performance of small-scale dairy goat farming project and assess extent at which project performance indicators influence the performance of small-scale dairy goat farming project. A total of 80 dairy goat farmers were recruited from four different areas in Kitui County for this project, which targeted 100 small-scale dairy goat producers. A semi-structured questionnaire was issued directly to small-scale dairy producers to obtain primary data. Secondary data sources included reports, relevant journals, books, the internet, and another literature review. The instruments' reliability was assessed using the test-retest procedure. For each variable, descriptive statistics were calculated. The data was presented using percentages and the mean. Using the Statistical Package for the Social Sciences, multiple regression analysis was conducted to examine the correlation between the independent variables (SPSS). There was a strong link between logical framework and performance of small-scale dairy farming projects ( $\beta=0.182$ ,  $p<0.05$ ); there was a strong link between Gantt chart and performance of small-scale dairy farming projects ( $\beta=0.272$ ,  $p<0.05$ ); there was a strong link between routine performance monitoring and performance of small-scale dairy farming projects ( $\beta=0.229$ ,  $p<0.05$ ); and there was a strong link between logical framework and performance of small-scale dairy farming projects ( $\beta=0.229$ ,  $p<0.05$ ). According to the findings, the performance of small-scale dairy farming operations is influenced by a logical framework.. The performance of small-scale dairy farming projects is substantially connected with Gantt charts; regular monitoring is significantly correlated with the performance of small-scale dairy farming projects. Finally, the study found that project monitoring indicators had an impact on small-scale dairy farming project performance. According to the study, small-scale dairy farmers should pay attention to how these efforts are planned and implemented, without disregarding the need of using a logical framework approach. Project monitoring and evaluation should be stimulated since it advances performance of a project to the greatest extent feasible.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

Monitoring and evaluation (M&E) is a critical project activity since it influences success of a project (Mantel & Meredith, 2011). All stakeholders are kept up to date on the current state of a project in relation to its initial objectives, such as deadlines and budgets, in a timely and accurate manner. Monitoring and evaluation are commonly viewed as the identical activity because they are linked management of project responsibilities that happen in a sequential order. This is a crucial project activity because it influences the project's success. All stakeholders are kept up to date on the current state of a project in relation to its initial objectives, such as deadlines and budgets, in a timely and accurate manner. M&E is rapidly being recognized as a crucial prerequisite for project performance, according to Day (2010). This is for the reason that M&E establishes a foundation for being responsible in the utilization of existing resources.

Domestic goats (*Capra hircus*) domestication can be traced back a thousand years ago (Marcel et al., 2017). Goats have extraordinary adaptability to extreme weather conditions like extremely dry areas and other harsh climate areas where other domesticated animals would hardly survive. It makes Goat rearing a unique and worthwhile venture. Around the world, there are about 500 million goats with milk production estimated at 4.5 million tonnes. Apart from that, goats are of economic value since they provide meat, leather, income, and manure. The dairy population alone is estimated at 15 million. In the rural areas, goats act as a valuable asset since they can be easily converted into liquid cash in emergency cases like sickness, school fees, and debts and stand in as a source of money when other farming ventures fail.

According to Kikwatha et al., (2020), dairy goat farming in Kenya has grown in popularity as an important contributor to the agricultural economy, particularly in small-scale farming systems and high potential areas due to an increase in population and consequent decrease in the size of land available for use. In Kenya, dairy goat farming first emerged in the early 1950s but began to pick up in the 1980s (Kikwatha et al., 2020). Lately, there had been numerous funded projects to improve the sector. Together with FAO, the UNDP had been at the forefront of these projects after the government-funded projects failed to hit their projections to supply interior farmer quality breeds of dairy goats.

Goat milk has proven to contain numerous advantages for human health in terms of fat, proteins, Lactose, mineral, and other vitamin contents (Turkmen, 2017). Phospholipids in goat milk enhance digestion due to small fat globule size fatty acid content. It also has large amounts of coupled linoleic acids, which help stimulate immunity, promote growth, and prevent common contracting illnesses. Above all, goat milk contains proteins that have healing effects on common allergies in cow milk and some foods, which mostly cause deaths in young children (Caballero, 2003).

The proteins contained in goats' milk are similar to human milk. It is highly digestible and absorbed in the human body compared to cow milk, which contains high levels of protease enzymes and lactose as the carbohydrate, which is also found in all other types of milk. Goat milk is very rich in oligosaccharides essential for protecting intestinal infection by pathogens and more important in brain and nervous system development. The amount of minerals in goat milk is considerably higher than that in other dairy milk (Ronald et al., 2018). One of the important vitamins that make goat milk distinct is Vitamin A. It is notable that many child mortalities annually are due to a lack of vitamin A.

Above and beyond all advantages of rearing dairy goats, we cannot forget the low cost of acquiring, breeding, and managing in terms of feed and water. The animals don't often require specialized housing like other livestock. It is a sufficient reason to encourage the enhancement of goat milk production globally.

The county of Kitui is about 170km to the South East of the Capital city, Nairobi, and scopes about 30496km<sup>2</sup>. To the North, It borders Embu to the North West, Tana River to the East and South East, Machakos and Makueni to the West, Tharaka-Nithi and Meru, and Taita-Taveta to the South. According to Census data of 2019, the estimated population of dairy goats is 118,000, out of which, only 30,000 are dairy breeds. Over the years, small-scale dairy goat farming is turning out to be a high-return option for ordinary Kenyans with limited resources. However, it has been faced with challenges in managing the outputs, outcomes, and impact of such projects. Kitui County being mostly a Semi-Arid area, where rearing dairy cows is a key challenge, has a bigger opportunity to thrive in this sector since it doesn't require a lot of resources and capital. Goat farming helps local families make ends meet by selling milk and meat, both of which are in high demand (Muasya, 2015).

## **1.2 Statement of the problem**

Monitoring and evaluation play a critical role in ensuring projects succeed (Kutlar et al., 2017). Monitoring is a concurrent process carried out to provide specific feedback and information concerning the project status and ensure it reaches stakeholders at the most appropriate time. On the other, evaluation helps ascertain whether the program activity is implemented as intended and has resulted in the desired outcome. It is almost impossible to attain project objectives without applying monitoring and evaluation tools. To achieve a greater value, the program manager needs to apply M&E to develop frameworks and guidelines for measuring projects' impact. With the human population, there is a high demand for a high return on agricultural ventures requiring less land utilization. The average goat milk production has

remained low over the years, with an average production of between 0.5 to 0.75 liters per goat (DLPO, 2012). Poor production can be associated with climate conditions, the farms' size leading to unavailability or insufficiency of fodder (Verbeek, Kanis, & Kosgey, 2007). In response to these challenges, many small-scale farmers have resulted in alternative rearing dairy goats, which may result in poor productivity. Low-income levels might also cause this among farmers. Proper monitoring and evolution of dairy goat projects will automatically improve productivity (Kosgei et al., 2006).

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

The main aim of this study was focused on Kitui County a semi-arid area where farming has been hard for the past years. The study focused on ways that can help farmers with the growth of small-scale farming that helps in the production of dairy products that they can sell and enhance the growth of its economy in Kitui County.

### **1.4 Objectives of the study**

- i. To establish the extent to which the use of Logical Framework influences the performance of small-scale dairy goat farming projects.
- ii. To determine how the use of Gantt charts in scheduling influences the performance of small-scale dairy goat farming projects.
- iii. To establish how routine monitoring influences the performance of small-scale dairy goat farming projects.
- iv. To assess the extent to which project performance indicators influence the performance of small-scale dairy goat farming projects.

### **1.5 Research Questions**

- i. How does routine monitoring influence the performance of small-scale dairy goat projects?

- ii. How does the use of Gantt charts in scheduling influence the performance of small-scale dairy goat farming projects?
- iii. To what extent does the use of a logical framework influence the performance of small-scale dairy goat farming projects?
- iv. To which extent does the use of project performance indicators influence the performance of small-scale dairy goat farming projects?

### **1.6 Research Hypotheses**

**H<sub>01</sub>:** There is no significant relationship between the use of Logical Framework and the performance of small-scale dairy goat farming projects.

**H<sub>02</sub>:** There is no significant relationship between the use of Gantt charts in scheduling tasks and the performance of small-scale dairy goat farming projects.

**H<sub>03</sub>:** There is no significant relationship between routine monitoring and performance of small-scale dairy goat farming projects.

**H<sub>04</sub>:** There is no significant relationship between project performance indicators and the performance of small-scale dairy goat farming projects.

### **1.7 Significance of the study**

The outcomes of this study will stoke debate over the value of using M&E tools to evaluate performance in projects like small-scale dairy goat farming. It could also aid in the creation of a systematic procedure and policy development for project planning, implementation, and completion. It will enhance the body of understanding in the arena of M&E.

The project is based in Kitui County, a semi-arid area that will help with zero eradication of over-reliance in the rural areas of donations of dairy products like dairy goat milk, cheese, among others. The youths within this area will have an opportunity to be employed and hence



it will create job opportunities within the region where production of small-scale dairy farming will apply.

Growth in the economy will be experienced in the significance of this study since the farmers of the small-scale farming of dairy goat milk and its products will give a leeway to the region being invested in and soon it might grow from the small-scale farming of goat milk to large scale farming of dairy goat milk and its products. Also, it may help the farmers with the consumption locally of its products within the community which will help in the reduction of over-reliance on relief products from the government in rural parts of Kitui County. In addition, the application of the small scale farming will help in the creation of job opportunities within the county and thus will help in the eradication of unemployment among the youths of Kitui who move to other counties in search of employment. Lastly, there will be an expansion of knowledge of what goat dairy product entails as compared to what is known as cow dairy products. Knowledge will be passed from different persons and this will help with the recognition and company manufacturing goat dairy products whose origin will be pioneered from Kitui County.

In addition, the result of the significance of this study will give the health experts within the region a chance to help in the supplementation of people with allergies to cow milk and introduce a new way of using goat dairy products as a supplement. Lastly, the national government and the county government will benefit from this study by having a better understanding of new experiences, advantages, challenges faced by upcoming small scale farmers from the first stage of investing, being entrepreneurs, managing small scale farms, expenditures, harvesting, production and trading of the goat dairy products.

### **1.8 Limitation of the study**

Insufficient funds, time limitations, among other challenges limited the scope of this study, making it to be confined to Kitui County only. To mitigate the time constraint, the researcher used assistants to hand out questionnaires to the respondents. On financial challenges, there was minimal wastage of available resources.

Interviews and questionnaires were not used on this research paper, since most of the work relied on secondary sources like articles and journals. Moreover, various databases were used in obtaining materials for my research.

Lack of experience: this being the researcher's first time to tackle a master's program research endeavor, linking the set variables intricately may prove hectic. The COVID 19 pandemic that has taken over the world is also a limitation based that the research was mostly based online, and the help of online libraries was used during the research, access to physical libraries and lockdown on various learning institutes were not accessible. The researcher was limited to online materials mostly.

### **1.9 Delimitations of the study**

This study focused on small-scale dairy goat projects within Kitui County. The researcher is well conversant with the scope area hence interaction with the farmer was easy. The positive factors that come with monitoring, evaluation tools and performance of small-scale dairy goats farming projects, trade, exports, and imports of dairy goats. Various Kenyan farming statutes on small-scale dairy farming were generated from the Republic of Kenya laws to support some of the statements. A comparison may be used in the thesis with a country or county of my choice. In addition, when it comes to comparison with an international state, some of the international statutes and laws were used. Delimitation of the study was bound to Kenyan

Laws. The study will not be expounded on an International basis and other International conventions of small-scale farming of dairy goat farming

### **1.10 Definition of Significant Terms**

**Gantt charts:** Is a popular graphical representation of a project timetable. It's a form of bar chart that displays the start and end dates of project elements including planning, resources, and dependencies.

**Logical Framework:** Is a design, monitoring, and evaluation technique for international development initiatives.

**Monitoring and Evaluation tools:** M&E tools are used to follow the progress of a project by collecting and analyzing data about it in a methodical manner. They provide information on whether operations are being carried out according to the original plan.

**Monitoring and Evaluation:** A monitoring and evaluation system is a method for keeping track of project inputs, actions, and outcomes in order to determine if the project is on track or has veered off course.

**Project performance indicators:** Project effects, results, outputs, and inputs are tracked during execution to measure progress toward project goals.

**Project:** A group of interrelated tasks that must be completed within a given time frame and within certain cost and other constraints.

**Routine monitoring:** Refers to evaluation and other activities that must be completed periodically in accordance with the maintenance program and plan.

### **1.11 Organization of the study**

There are five chapters in this research. The first chapter introduces the study, discusses its background, and states the problem. It also includes the study's aims, research questions, and significance, as well as any pertinent information.

The second chapter discusses relevant academic investigations, ideas that underpin the study, and the conceptual framework. The third chapter discusses, among other things, research methodology, data gathering tools, and data collection methodologies.

The presentations, analysis, and interpretation of data, as well as the conclusion of the research findings, will be covered in Chapter 4. Finally, in the fifth chapter, an outline of the study's findings, summary, conclusions, and suggestions will be presented.

## CHAPTER TWO

### LITERATURE REVIEW

#### **2.1 Introduction**

This section examines related literature in light of the study's goals. It focuses on the concept of performance of dairy goat farming projects as well as the other concepts highlighted in the study objectives including Logical Framework, Gantt charts, routine monitoring, and performance as monitoring and evaluation tools of small-scale dairy farming from a broader angle narrowing down to Kenya as studied by other scholars.

#### **2.2 Performance of small-scale dairy farming projects**

Chandes & Pache (2010) describe project performance as the overall project quality in terms of its direct impact on its beneficiaries and whether involvement is necessary. It is distinct from other sectors like manufacturing due to its uniqueness. Performance is measured with the direct benefits acquired after successfully rearing dairy goats and satisfaction to the farmers. Technically, the dairy goats have matured and can produce the right amounts of milk with minimum mortalities hence bringing returns. The criteria by which project performance can be measured include finding out its relevance, efficiency effectiveness, and its impact on the community (Hill, 2005).

After dairy cattle, dairy goats are the second most relied on animals for milk production worldwide. It includes mostly moderate and tropical environments. In the last three decades, there has been an exponential increase in the dairy goats' population. Initially, most people reared dairy goats for households' purposes, unlike today, where this sector has been commercialized and has also attracted modern agricultural practices like value addition. In other parts of the world like South Africa, the products from goat milk are a preserve for the tourism industry (Dubeuf et al., 2004). Many health conditions are treated with the products

from dairy goat milk. Dairy goat farming in South Africa most likely began before Europeans arrived in the country. To increase the genetic quality of the local dairy goats, nothing was done at initially. In 1898, the Cape Agricultural Department sent three Saanen bucks and 12 does to South Africa from Switzerland. The majority of the Saanen goats now found in South Africa are descended from two bucks and 15 more Saanen goats brought from Switzerland in 1903. Typically, the milk output is calculated throughout a 300-day lactation period. The milk sample collected is used to determine the quality of each doe's milk. Protein and protein content are determined from the samples. Initially, the fat content of the milk was the only thing examined during the monthly examinations (Carina & Este, 2018)

In Mexico, (Lu & Miller, 2019) observed that several factors like the flock size largely influence dairy Goat rearing profitability. Small-scale dairy goat farmers in rural areas mostly practice this type of farming to create jobs to sustain their daily lives. In most cases, these ventures fail due to limited resources, lack of technical knowledge, little investment, among others. It leads to fluctuations in profits. Sometimes they earn, and sometimes they don't. The rise in the price of animal feeds and the lack of a ready market for goat milk further worsen the situation. Also, there is a high illiteracy level among farmers in rural areas; therefore, they lack the knowledge of how to adopt modern farming practices, which are likely to earn them profits.

Project performance is characterized in this study as on-time implementation, cost-effectiveness, project quality, on-time completion, and stakeholder satisfaction. According to the research, these are critical indicators of project success, including early childhood development and education programs. The process of getting a project from concept to reality within a set of deadlines is known as timely implementation (Smith et al., 2014). The timely project implementation is critical to its success. Late project implementation stymies economic progress. The bulk of government-funded initiatives, according to Bothale (2017), are either poorly fulfilled or never executed at all. The budget, timeframe, and scope of the project should

all be respected during implementation. The amount to which a project is implemented has an effect on its outcomes.

Project implementers should evaluate cost effectiveness as a project performance metric, especially in resource-constrained institutions (Thompson, Pulleyblank, Parrott and Essex, 2016). When compared to project alternatives, cost effectiveness guarantees that project results are achieved at a reduced cost. It compares the project's advantages to the monetary value it generates. In the field of education, cost effectiveness aids in determining whether initiatives are capable of achieving certain goals at the lowest cost. Projects with the lowest cost per outcome guarantee that societies make the best use of their resources (Levin, 1995).

Completion on time is a sign of future performance. According to Block and Peterson (2015), the most sensible strategy to minimize project delays is to develop a project plan and to refer to and adhere to the project schedule throughout the project's life cycle. Some developers, on the other hand, frequently overlook the rigorous and systematic approach. Project schedules aid in the detection of delays and the control or minimization of losses. Timing assessments, according to Yu, Flett, and Bowers (2005), are used to assess the success of a project.

Stakeholder satisfaction is a key measure of project success. Stakeholder participation leads to stakeholder satisfaction. Stakeholder engagement is seen as a moral and ethical feature since it prioritizes the interests of specified stakeholders. For project stakeholders' satisfaction, early childhood projects must be implemented within the projected project cost, conform to the defined project timeline, and be of excellent quality (Westerveld, 2003).

### **2.3 Logical Frameworks**

Project achievement is the fundamental concept of any project management. Logical frameworks help in understanding and analyzing the ideas of project management and project success. (Belout, 1998) notes that projects are developed and geared towards attaining specific

objectives and success. The degrees to which the objectives have been attained directly reflect the success of the project. A proper project is made up of a hierarchy of objectives linked together so as to be easily identified and structured through the use of logical framework.

A logframe, also known as a logical framework, depicts the project's M&E device's conceptual underpinning. The logframe is a matrix that specifies what the challenge is expected to accomplish (targets) and how its fulfillment can be tracked (indicators). Because the M&E system's indicators are based on this hierarchy, it's vital to understand the variations between project inputs, outputs, effects, and impact. The number three defines the major phases and components of a conventional 4 x 5 logframe matrix. It's crucial to remember that different firms in the improvement community use different forms and words for different types of logframe goals; Rugh (2008) provided a helpful guide to deciphering the terms used by the most major improvement organizations.

For M&E planning, a good understanding of the log body's hierarchy of goals is essential. In the long term, it will lead the evaluation of assignment procedures and influences by informing the important questions: Purpose: To what extent has the assignment contributed to the organization's long-term goals? Why is that or why isn't it any longer? What unexpected good or bad things happened as a result of the venture? What prompted them to rise? Effects: What changes have occurred as a result of the outputs, and how much do you think they'll contribute to the mission's purpose and intended effect? Has the mission made the changes for which it can be held accountable? What tangible products or services has the job generated as a result of projects? Projects: Have you executed any scheduled projects on time and on budget? What unplanned projects were completed? Inputs: how effectively are the resources being used? It's also crucial to understand the logframe's hierarchy of indicators. It is also easier to degree lower-stage indications with a large group of workshop participants, but when attempting to degree behavioral changes, the issue of accuracy and dimension complexity arises. The higher



up the indicator hierarchy you go, the more data types and resources you'll need to analyze and synthesize. This has an impact on the processes and evaluation of the M&E facts series, which has ramifications for staffing, finances, and timelines (Chaplowe, 2008).

LFA is a scientific planning method for managing the whole venture cycle. It's a painless solution that considers the viewpoints of all stakeholders. It includes a mission completion criterion as well as a list of key suppositions (Pradhan 2011). The logical framework technique was established in the early 1960s in response to the planning and monitoring of development activities (Pradhan, 2011). USAID offered the basic conceptual structure towards the end of the 1960s, while Norad made substantial contributions in the 1990s (Pradhan, 2011). Milika (2011) claims that the logical body of work allows for the analysis of a current situation by establishing a causal link between inputs, undertakings, effects, reason, and a standard objective (vertical common sense); defining the assumptions on which the challenge common sense is built; recognizing the capacity dangers for achieving objectives and reason; and establishing a device for achieving objectives and reason. Strengths, weaknesses, opportunities, and dangers are also taken into account.

Milika (2011) observed that LFA enables decision makers, managers, and other project stakeholders to exchange information and communicate more effectively, as well as providing management and administration with standardized data collection and analysis techniques. Milika (2011) claims that LFA provides method consistency when legitimate challenge staffs are substituted.

The logical framework is crucial, according to Nyandemo (2010) and Barasa (2014), because it is the first stage in mission planning and execution. According to Nyandemo, this would allow the United States to plan initiatives using a logical framework that includes standard and

immediate objectives, indicators, and target business analysis. In terms of task implementation, this was a huge step forward for Ghana.

According to Leuzzi (2013), the components of a LFA matrix based on dreams, reasons, and mission undertakings that can be itemized inside the logical framework matrix are a crucial component of the logical body. When planning, enforcing, and comparing specific projects and programs inside a motion plan, the logframe is used. It's well-liked for doing logical evaluations during project design, as well as for tracking progress and analyzing tasks and output throughout project implementation (Kikwatha, 2018).

The application of LFA to a challenge or program layout necessitates rigor in evaluating what needs to be done and the assumptions that underpin what interventions and undertakings may be necessary. Many international funders, such as the Asian Development Bank and the European Commission, demand that the projects they support be developed according to an LFA (Wageningen, 2010). The advantages of employing a logframe approach are as follows: It may be used to assess assignment concepts and ideas for relevance and usefulness at the basic stages; it publishes a systematic and logical examination of the essential connected aspects that make up a well-designed task; it establishes connections between the assignment and external factors; it serves as the primary reference for developing special work plans, terms of reference, budgets, and other documents during implementation (Wageningen, 2010); it provides indicators against which the venture's progress and accomplishments can be measured (Wageningen, 2010); and it establishes a common method and terminology among governments, donor groups, contractors, and clients (Wageningen, 2010).

Bakewell and Garbutt (2009) conducted a study with 18 diverse groups, including European NGOs, donors, consultancy organizations, and NGOs in developing international locations using an easy structured questionnaire to see the way the logical framework evaluation is

employed for evaluation and monitoring. The outcomes suggest that rather than the task itself, the attention is on the logical framework for investigating the expected project goals given forth in the matrix. The findings bolster the concept that, in theory, the logical framework may be changed and changes made throughout the program cycle, as a bare minimum to the mission's objectives and results; nevertheless, this does not happen very often in actuality. In the investigation, the questionnaire was the most effective data gathering technique, however today's investigations include an interview guide and a questionnaire as the collection instruments for primary data.

Businge (2010) in Uganda's Ruwenzori area; persons in top positions in each organization serve as the unit of analysis. Donors seldom act outside of the log frame approach, according to the research, which incorporates mission tasks as critical components. They are, however, bound by the assignment's logical structure, and the circumstances on the ground may occasionally affect the fulfillment of a number of the tasks, prompting the adjustment of some components of the task in connection to the objectives. It was determined that any suggested modifications by the imposing groups would be subjected to extensive side-by-side communication regarding the variations. The study was based on longitudinal data and did not investigate the causes of the factors or their impact over time. Using pass-sectional data, the cutting-edge study investigated the causation and effect of suggested relationships at a given point in time.

## **2.4 Gantt chart**

In any project, long term or short term, where stakeholders are part of, effective communication becomes an essential factor. It leads to higher motivation, better coordination, and higher productivity. Gantt charts are a well-known visualization method in today's project management to effectively control and communicate project activity (Burkhard et al., 2005).

Gantt chart is a tool in project management graphical that portrays the planned and actual development of work over the period included by a project (DuBrin, 2011). They are very useful to the project managers in calculating the various resources required in the project plan and recording actual work in progress (Clark et al., 1922). A Gantt chart comprises a horizontal axis reflecting the time and a vertical axis that reflects the project undertakings. The project managers need Gantt charts to be able to illustrate every practical aspect of a project as well as plan on a timeline of task completion as well as identifying the critical path sequence of project tasks that need to be completed within a given timeframe and ensure the project completed on time (Clark et al., 1922).

To create a Gantt chart, the project manager first needs to understand all the tasks that make up a project, come up with people responsible for each task, and allocate timelines. Possible challenges during the project should also be captured. This thorough thinking ensures that the project is workable and ensures that the right people are allocated the right tasks and ensure solutions for possible problems before the project kicks off (Clark et al., 1922).

The following criteria were considered when using Gantt charts: resources, work completed, and time taken. Gantt charts, according to Gerald and Lechter (2012), are an extremely important tool for project management since they can be used to track progress for each task as well as how expenses are going. Breaking down a project into a series of tasks and assigning each project to its own row along the vertical axis is how Gantt charts function.

Khosrow-Pour (2010) examined the impact of records technology on challenge aid management, concentrating on the use of Gantt charts, and discovered that in Boston, Gantt charts were useful in assuring task completion through good useable resource control. The importance of assignment management integration was highlighted in the study results, which included mission scope management, mission time control, undertaking fee management,

assignment fine control, mission human resource control, project communications management, task risk control, and venture procurement management. Regardless of whether the investigation's conclusions were significant for effective task implementation, it was carried out in a one-of-a-kind geographical location.

Stare (2012) performed research in Slovenian firms to look at the influence of project organizational culture and organizational structure on overall task performance. The investigation also looked into the subculture's ability to impact project execution. The focus of the studies shifts to top and line management attitudes, as well as a few other elements related to managers' attitudes toward internal policies and respect for the venture supervisor's official authority. The study looked at the most frequent mission organization types as well as the connections between the culture, organization, and overall assignment performance. The study revealed a strong influence of measured way of life traits on project performance, as well as a high level of project organizational subculture. In some employer types, boosting challenge supervisor power has a positive impact on a range of cultural qualities and has a direct bearing on the project's success. This study was carried out in Slovenian businesses, but the current inquiry is focusing on the influence of mission control application equipment on Kenya's difficult overall performance.

Work completed in an assignment became one of the most important criteria determining challenge success among manufacturing organizations in Malaysia (Kuen, 2012). He looked into the essential fulfillment components for project control and discovered that the job he did had an effect on the project's overall performance. This study categorized production fulfillment into micro and macro dimensions based on the replies of 79 respondents to 79 completed projects. The study, however, did not examine the link between factors over time.

The Gantt chart can be used to highlight the relationship between long-term projects, short-term events that require a lot of labor to finish, and milestones that signify key achievements or decision points. Different milestones might include the buyer's acceptance of the venture design or the full project prototype, as well as the distribution of character modules to various organizations. Many annotations can be used to show how far the project effort has proceeded in relation to the baseline plan, as well as to depict places where the baseline plan's expectations have altered in a graphical manner. The researchers used descriptive statistics to explain the objective of each researched variable, but they didn't look at the quantitative data. The quantity of paintings produced had a substantial impact on the project's overall success, according to the report.

The Gantt chart, at its most basic level, depicts the relationship between various components over time. It's mostly used for production planning, scheduling, and tracking project completion times (Ghosh, 2013). After the mission begins, managers will almost definitely fill the empty bars to a length that corresponds to the percentage of the task that has been done for each mission. To the left of this image line are the tasks that are said to have been completed completely. If they're done, their whole bars will be stuffed. Partial filling indicates that there will be blunders. Crossing the picture line means you've got cutting-edge obligations on your hands; at the very least, you've got tasks that were supposed to start today. An analysis was conducted into the amount of time spent in an organizational setting using a single construct of Gantt chart software.

## **2.5 Routine performance monitoring**

Routine monitoring in small scale projects is used primarily to create a better working condition for the livestock farmers through assessment of management, productivity, and profitability of a given project. Research developed in Spanish goat farms by (Castel et al., 2010) found different dairy goat production systems but farmers' very little data collection and analysis by

farmers or technicians at the farm level. Even though most studies have focused on classifying and making dairy goat farming a profitable venture in Southern Spain, the current study has focused on indicators related to environmental and social aspects of sustainability at the farm level (Batalla et al. 2013).

Routine monitoring development on projects' performance is essential since it ensures that the needs of small ruminants like sheep and goats are catered for at the farm level. The outcomes of farm-level assessments might be utilized to measure the impact of various husbandry conditions on animals. It is essential to increase the animals' quality and hygienic standards (Mariangela et al., 2010). Consumers who demand quality goat products also expect that those animal products are acquired and processed concerning animal welfare.

Scientific production amongst small ruminants is poor since small ruminants poorly adapts to conditions and are still mostly produced in large-scale manufacturing systems. In recent years, intend-save production systems for goats and sheep species are spread throughout the Mediterranean basin's Northern countries, and specialized dairy breeds are larger in size. Besides, goats and sheep are taken care of by shepherds with no specific stockmanship skills and lack appropriate abilities, know-how, and the ideal professional competence to adequately take good care of the animals. Currently a review being carried out discusses several issues that may help build on-farm welfare monitoring systems for small ruminants (Mariangela et al., 2010).

Monitoring is efficient and autonomous, and they are an evaluation of State Corporation on finished ventures including its plan, usage, and results. Monitoring additionally evaluates the importance, proficiency of utilization, viability, effect and maintainability of the project. The reason for monitoring is to guarantee that the application is moving as indicated by plans and if not the project manager makes a restorative move, it is the control capacity of venture

administration (Crawford & Bryce, 2003). Observing upgrades extend administration basic leadership amid the usage henceforth expanding the odds of good execution. Monitoring likewise helps early distinguishing proof of issues before they escape hand since it is persistent. Monitoring, according to Joe and Nay (2014), is a rigorous way of collecting and analyzing project information on implementation coverage in order to use it to better management in the long run. The study's findings revealed a diversity of viewpoints on the aim and function of recurrent monitoring, as well as its significance in the challenge lifestyles cycle. Furthermore, the impacts of the monitoring and evaluation approach were shown to be crucial to the software and mission identification process, as well as a key contribution to institutional learning and comments.

In Kenya, Ndagi et al. (2016) investigated the impact of routine monitoring on the long-term viability of agricultural food crop efforts. Their investigation revealed that the management of the majority of the initiatives implemented in the region did not have monitoring and evaluation planning conferences or subjects. As a result, regular monitoring and planning led to the long-term viability of food crop operations. The analysis focused on the critical role of tracking and assessment in determining the achievement of efforts, particularly routine monitoring plans including farmers or other stakeholders in the whole process. The mission's personnel must be involved in the tracking and evaluation of the mission. Furthermore, the lack of a relationship between farmers and authorities may impede farmers from gaining access to the information, records, experiences, and technology they need to increase productivity and sustainability.

Phiri (2015) investigated the effects of recurring tracking on the performance of African Virtual University's initiatives in Kenya. Projects inside the agency were chosen to investigate the link between the success of these efforts and the tracking and assessment projects, and it was discovered that there was a positive association between the two. According to the findings,



consistent and thorough execution of habitual tracking is required to get positive results in activities. Because institutions implement the majority of projects, it is critical and suggested that the tracking and evaluation unit be included in the group to ensure that the recurrent monitoring role is carried out effectively.

Waithera and Wanyoike (2015) investigated the overall effectiveness of youth-funded agricultural activities in Bahati sub-county, Nakuru County, Kenya, as well as how monitoring and assessment influenced their success. In cases where the project team was experienced in tracking and assessment, the outcomes revealed a statistically significant impact on job completion. Because the bulk of these projects are supported by a business, it was determined that providing brief, formal training on recurring tracking to outstanding teenage firms that might prepare for the employer's investment to assure better assignment overall performance was necessary.

In Kenya's Kibera slum, Ngatia (2016) examined the institutional elements that affect the use of participatory monitoring and assessment systems in community-based overall development initiatives. The findings demonstrated that the challenges influencing routine monitoring of overall government program performance had a number of faults that, if not solved, will have a substantial impact on the system's success. The money necessary for the costs of crossing the large site, as well as payments such as allowances for the monitoring and assessment committee, are insufficient, resulting in unfavorable monitoring and evaluation endeavors.

In Nairobi County, Kenya, Nzigu and Karanja (2018) investigated the influence of tracking and assessment procedures on the completion of gated residential housing tasks. Monitoring and assessment were found to be crucial to the effectiveness of gated residential housing chores, according to the conclusions of the inquiry. There was no budgeted provision for monitoring the endeavor implementation in many cases, particularly because of the ownership

and nature of gated residential housing developments. As a result, the research suggests devoting funds for tracking and assessment, as well as the development of a strategic plan, logical framework, and budget. For better outcomes, tracking and assessment should be done not only at the end of a work, but from the beginning to the end.

## **2.6 Indicators formulation**

Indicators are specific, observable, and measurable features that bring out the changes or progress a program makes towards attaining a specific outcome. There has to be at least one indicator for each outcome (Jody & Ray, 2004). Indicators should be formulated by all research staff and parties involved with the technical know-how of the objectives and goals of the study. Once agreed upon, a common framework for all parties involved is built by indicators in order to measure the degree to which the program is progressing and attaining its objectives over time (UNDP, 2009). Impact indicators explain the progress made towards attaining highest goals in a project. They formulate statements that describe the objectives held in common with all entities concerned with development (Bollom, 1998).

Parsons et al., (2013) found that process indicators are essential to understand how a project was executed as planned and points out obstacles to implementation. Activity indicators are critical project management tools when they describe the various components of a project in specific and measurable terms detailing the resources required and assigning tasks to various individuals involved. They are most significant as they explain the relationship between a given set of undertakings and the expected outcome. Process indicators must contain critical ingredients for the success of a project (Parsons, Gokey, & Thornton, 2013).

Input indicators should be developed to assess the amount of availability of essential resources that assist in countering possible unforeseen challenges. For example, in order to address pre-trial detention problems in South Sudan, the United Nations through a project introduced a

management system that was computerized to prisons throughout the country. Most prisons in rural areas are not connected to electric power needed to run the computers or the supply is not steady. A large number of the staff in the prisons lack knowledge of computers. Indicators should be assessed with these crucial inputs in order to achieve maximum impact (Parsons et al., 2013). Input indicators to the extent possible should borrow from the existing project management tools. Through budgetary reports, requisition orders, and transport information on the available resources to your project is provided. This also indicates potential delays.

Output indicators are concerned with the delivery of products. They train and equip with technical skills, set standards and formulate laws and formal documents, put up the infrastructure as well as recruiting staff required to implement a project (Daberkow, 1987). Output indicators together with inputs and undertakings provide economy and efficiency measures that explain how investment in a project and the products are related. It is very crucial to regularly check on output indicators throughout the course of the project in order to monitor project progress (Parsons et al., 2013).

## **2.7 Empirical Review**

Kihuha (2018) highlighted that monitoring and evaluation are commonly viewed as the identical activity because they are linked management of project responsibilities that happen in a sequential order. This is a crucial project activity because it influences the project's success. All stakeholders are kept up to date on the current state of a project in relation to its initial objectives, such as deadlines and budgets, in a timely and accurate manner. M&E is rapidly being recognized as a crucial prerequisite for project performance, according to Day (2010). This is for the reason that M&E establishes a foundation for being responsible in the utilization of existing resources.

Shihemi (2016) looked at monitoring as a concurrent process carried out to provide specific feedback and information concerning the project status and ensure it reaches stakeholders at the most appropriate time. On the other, evaluation helps ascertain whether the program activity is implemented as intended and has resulted in the desired outcome. It is almost impossible to attain project objectives without applying monitoring and evaluation tools. To achieve a greater value, the program manager needs to apply M&E to develop frameworks and guidelines for measuring projects' impact. With the human population, there is a high demand for a high return on agricultural ventures requiring less land utilization. The average goat milk production has remained low over the years, with an average production of between 0.5 to 0.75 liters per goat.

Muchelule (2018) monitoring development on projects' performance is essential since it ensures that the needs of small ruminants like sheep and goats are catered for at the farm level. The outcomes of farm-level assessments might be utilized to measure the impact of various husbandry conditions on animals. It is essential to increase the animals' quality and hygienic standards (Mariangela et al., 2010). Consumers who demand quality goat products also expect that those animal products are acquired and processed concerning animal welfare. Monitoring is efficient and autonomous, and they are an evaluation of State Corporation on finished ventures including its plan, usage, and results. Monitoring additionally evaluates the importance, proficiency of utilization, viability, effect and maintainability of the project. The reason for monitoring is to guarantee that the application is moving as indicated by plans and if not the project manager makes a restorative move, it is the control capacity of venture administration.

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and measurable terms detailing the resources required and assigning tasks to various individuals involved. They are most significant as they explain the relationship between a given set of undertakings and the expected outcome. Process indicators must contain critical ingredients for the success of a project.

Kiruja (2015) looked into the impact of monitoring and evaluation on the performance of public-sector programs in Kenya and human resource, training, planning, and implementation technique were all regressed, and the findings demonstrated that all independent elements affected program success considerably and favorably. According to the study, human resource components such as monitoring and evaluation staff should have technical capabilities, be committed to the work, and monitoring and evaluation personnel tasks and responsibilities should be established at the outset of projects. Participatory techniques are essential throughout project monitoring and evaluation. The organization requires an electronic database for storing and analyzing software and data gathering tools, as well as platforms for reviewing progress and outcomes and reporting templates.

Kissi et al., (2019) describe project performance as the overall project quality in terms of its direct impact on its beneficiaries and whether involvement is necessary. It is distinct from other sectors like manufacturing due to its uniqueness. Performance is measured with the direct benefits acquired after successfully rearing dairy goats and satisfaction to the farmers. Technically, the dairy goats have matured and can produce the right amounts of milk with minimum mortalities hence bringing returns. The criteria by which project performance can be measured include finding out its relevance, efficiency effectiveness, and its impact on the community.

Rumenya and Kisimbi (2020) argued that monitoring is efficient and autonomous, and they are an evaluation of State Corporation on finished ventures including its plan, usage, and results.

Monitoring additionally evaluates the importance, proficiency of utilization, viability, effect and maintainability of the project. The reason for monitoring is to guarantee that the application is moving as indicated by plans and if not the project manager makes a restorative move, it is the control capacity of venture administration (Crawford & Bryce, 2003). Observing upgrades extend administration basic leadership amid the usage henceforth expanding the odds of good execution. Monitoring likewise helps early distinguishing proof of issues before they escape hand since it is persistent.

Ocharo et al., (2020) highlighted that monitoring and evaluation are commonly viewed as the identical activity because they are linked management of project responsibilities that happen in a sequential order. This is a crucial project activity because it influences the project's success. All stakeholders are kept up to date on the current state of a project in relation to its initial objectives, such as deadlines and budgets, in a timely and accurate manner. M&E is rapidly being recognized as a crucial prerequisite for project performance, according to Day (2010). This is for the reason that M&E establishes a foundation for being responsible in the utilization of existing resources.

## **2.8 Theoretical Framework**

Different theories exist in monitoring and evaluation each identifying a different paradigm and concepts. This study is anchored on the theory of change.

### **2.8.1 Theory of change**

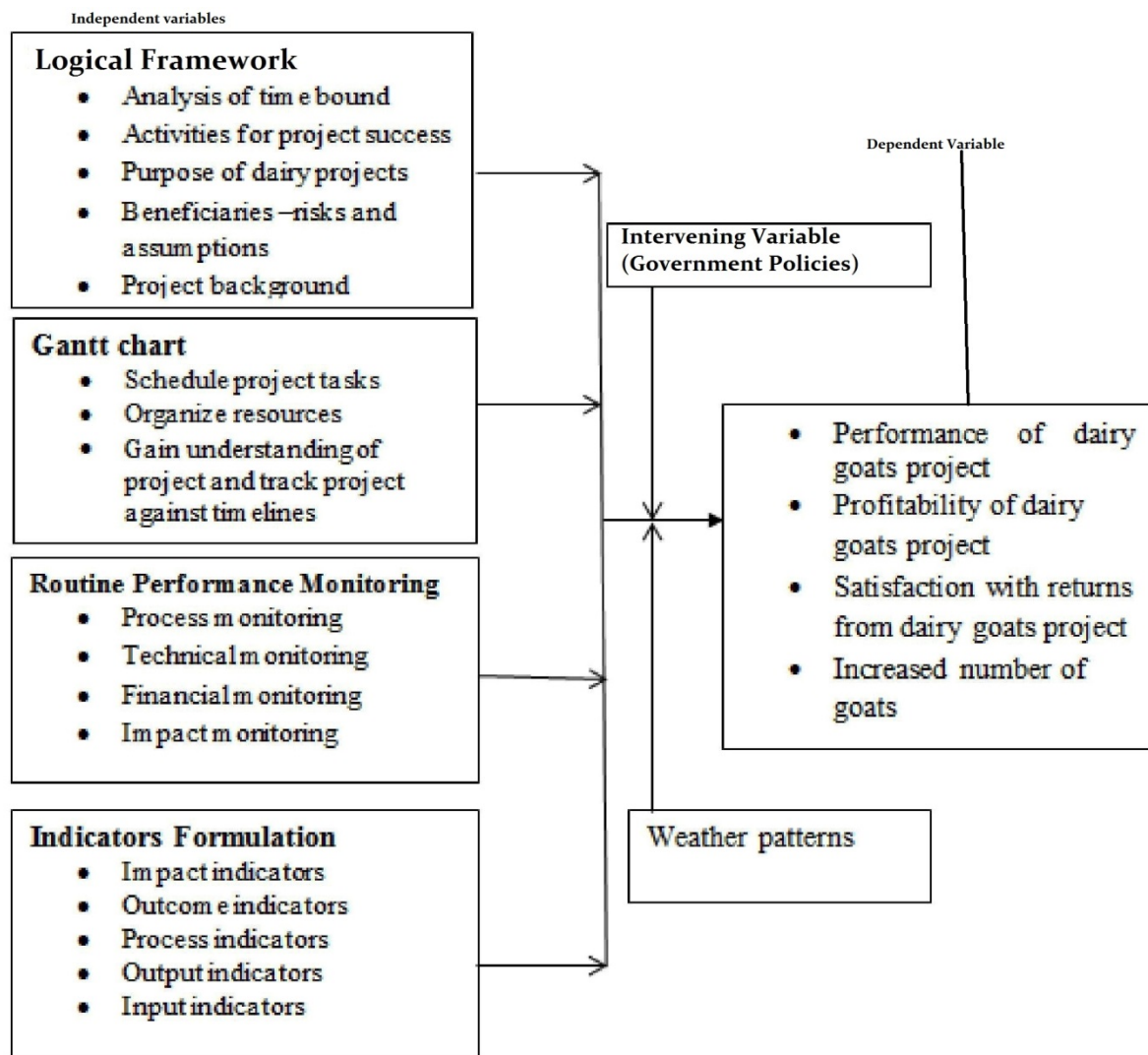
Carol Weiss propounded the theory in the year 1995. The theory is an improvement of program theory that came up in the 1990s, which improved evaluation theory. The theory gives a model that shows how a project is expected to work, which can be tried and fine-tuned through monitoring and evaluation (Setlhako et al., 2013). The Center for Theory of Change mentions that during generating the conduit of change, accomplices are expected to point out their

assumptions concerning the change process so that from their review and test, any assumption that is hard to support or sometimes impossible to achieve can be identified. To make that possible, three assumptions to be considered include; assumptions about the connection between long term, intermediate and early outcomes identified, justifying the claim that all-important conditions precedent required for success have been identified; and explanation supporting the link between program undertakings and the outcomes they are expected to produce. A description of the nature of change expected should be clearly defined - these entail details of the target population, the level of change expected to happen to show success, and the duration the change is expected to take before it is realized.

It further illustrates that evaluators are able to assess and track the expected outcomes and compare with the original theory of change only if the implementor is concrete about the project's goals. This theory will aid in the resolution of complex societal issues by providing guidelines on how a project should be implemented using a testable and refinable technique that includes monitoring and assessment tools.

## **2.9 Conceptual framework**

The variables of the independent variable include logical framework, Gantt charts, and routine performance monitoring and indicator formulation while the dependent variable has the performance of small scale goat dairy farming.



**Figure 2.1 Conceptual Framework**

## 2.9 Knowledge gap

Several studies on monitoring and evaluation tools have been conducted both locally and globally. In a study on performance of small -scale broiler poultry farming in Nyeri, women accounted for more than half of the small-scale farmers (Wanyahoro, 2015). Many studies on monitoring and assessment have been conducted based on the findings of the researcher. However, no research has been conducted on the effectiveness of monitoring and evaluation instruments in dairy goat farming, resulting in a knowledge deficit in this area.



**Table 2.1 Knowledge Gap**

<b>Variable</b>	<b>Author(s)</b>	<b>Purpose</b>	<b>Findings</b>	<b>Gaps</b>
Logical framework	Kihuha, P. E. N. I. N. A. H. (2018).	Monitoring and Evaluation Practices and Performance of Global Environment Facility Projects in Kenya	The study established adaptability of planning process and technical expertise on allocation of funds for M&E, development of clear M&E plans/tools	This study focused on Performance of Global Environment Facility Projects
Project Performance Indicators	Shihemi, (2016).	R. Influence of monitoring and evaluation tools on projects performance of construction and building projects in Kenyan public universities	Monitoring and evaluation (M&E) techniques helps address the issue of measuring performance and achievement of projects.	The study was limited to on projects performance of construction and building projects in Kenyan public universities
Routine monitoring	Muchelule, W. (2018).	Y. Influence of Monitoring Practices on Performance of Kenya State Corporations	Monitoring techniques and its adoption contributes to project performance significantly.	The study was confined to Projects Performance of Kenya State Corporations
Project performance indicators	John, B. (2020).	The effect of monitoring and evaluation to project performance in Rwanda. A case study of World Vision 2013-2017	Effective Monitoring and evaluation is well supported under specific undertakings that are tackled both tactically and strategically hence better project performance.	This study was conducted in Rwanda and was confined to project on World Vision 2013-2017
Gantt charts	Abalang, (2016).	J. Assessment of performance of monitoring and evaluation systems at	Management influenced performance of M&E systems through designing	This study was conducted in South Sudan

			CARITA Torit in South Sudan	objectives, planning of M&E systems	
Logical framework	Kiruja, V. E. (2015)	E.	Role of monitoring and Evaluation on performance of public organization projects in Kenya: A case of Kenya Meat Commission	M&E significantly and positively influenced performance of Kenya Meat commission projects	The study focused on performance of Kenya Meat commission projects
Routine monitoring	Kissi, E., Agyekum, K., Baiden, B. K., Tannor, R. A., Asamoah, G. E., & Andam, E. T. (2019)		Impact of project monitoring and evaluation practices on construction project success criteria in Ghana	M&E practices had a positive statistical significant relationship with construction project success criteria.	This study was delimited to construction project success criteria in Ghana
Project Performance Indicators	Rumenya, H., & Kisimbi, J. M. (2020).		Influence of Monitoring and Evaluation Systems on Performance of Projects in Non-Governmental Organizations: A Case of Education Projects in Mombasa County, Kenya	Performance of projects in education sector significantly and positively correlated with organizational structures for M&E, human resource capacity for M&E and project M&E plan.	This study was confined to Performance of Projects in Non-Governmental Organizations: A Case of Education Projects in Mombasa County
Routine monitoring	Onyango, (2019).	L.	Efficacy of Monitoring and Evaluation Framework on Implementation of Development Projects: A Comparative Analysis of Machakos And Embu Counties, Kenya	Monitoring and Evaluation, (M&E) frameworks allow for project undertakings to be measured and analyzed.	The study was limited to Implementation of Development Projects: A Comparative Analysis of Machakos and Embu Counties, Kenya

Project Performance Indicators	Njeri, J. W., & Omwenga, J. Q. (2019).	Influence of Monitoring and Evaluation practices on sustainable projects—a case study of the national aids control council.	M&E organizational factors, Human Capacity for M&E, Partnerships in M&E and Communication in M&E; and project sustainability.	This study was confined to sustainable projects—a case study of the national aids control council.
Routine monitoring	Ocharo, D. R., Rambo, C., & Ojwang, B. (2020).	Influence of Monitoring and Evaluation Frameworks on Performance of Public Agricultural Projects in Galana Kilifi County, Kenya.	Monitoring and evaluation frameworks was correlated to performance of public agricultural projects in Galana Kilifi County	The study was limited to Performance of Public Agricultural Projects in Galana Kilifi County, Kenya
Logical framework	Ngochi, M. E., Mbugua, L., & Thiong'o, K. (2020).	An Analysis of the Influence of Monitoring and Evaluation Functions On Projects Performance among Selected Constituency Development Fund Projects in Kirinyaga County, Kenya	Monitoring and evaluation frameworks influenced the performance to a large and very large extent respectively	The study was confined to Projects Performance among Selected Constituency Development Fund Projects in Kirinyaga County

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter describes the design of the research as well as sample selection and data collection instruments as well as other variables related to collection of data.

#### 3.2 Research design

This study involved a descriptive survey that features knowledge assortment to check a collection of hypotheses to handle questions about the subject of the study. So as to analyze their attitudes and views on the application of observance and assessment tools and also the success of small-scale farm goat farming in Kitui County; knowledge is collected through personal interviews with elite respondents.

Descriptive survey style works best wherever facts square measure being sought-after and it offers results that are just about square measure precise. This technique additionally permits a scientist to assemble info for a selected period and interpret the outcomes considerately of the present conditions. The scientist found descriptive survey style acceptable since the look is employed indeed finding inquiries of various forms and additionally assisting the scientist to supply applied math info on application of observance and analysis tools and performance of small-scale farm goats as well as logical framework, Gantt charts, routine observance and performance indicators. The strategies of analysis used in descriptive analysis square measure survey strategies of all types, as well as comparative and reciprocity strategies (Kothari, 2009). The analysis used most of the quantitative approach to numerically analyze the info collected through questionnaires.

### **3.3 Target population**

A community refers to any category of institutions with similar characteristics of individuals or artifacts (Ogula, 2005). Small-scale farmers who kept less than 1000 flocks of dairy goats in the eight sub counties of Kitui County (Ministry of Livestock, Kitui County, 2020). Among the eight four sub counties of Mwingi Central, Mwingi West, Mwingi North and Kitui West were the targets of this research (Musyoka, 2018). Of the four sub-counties, a sample population of 80 farmers was selected to represent the whole population. Within the four sub-counties, the farmers were geographically dispersed. The four sub counties were selected because of their location close to the researcher and hence making it convenient in data collection, subsidies cost and less time involved.

### **3.4 Sample Size Selection and Sampling Procedure**

The increased demand for a representative statistical sample in empirical research has necessitated the development of a trustworthy sample size estimation technique. Krejcie and Morgan (1970) established a table for estimating sample size for a specific study to fill the gap (Ogula, 2005).

#### **3.4.1 Sample Size Selection**

The sample size for this study was 80 small scale farmers was chosen for a target population of 100 small scale farmers. The study opted for four sub counties because of the number of small scale dairy goat farmers' population distribution available and accessible according to Kitui daily goat farmers' association estimate data. Mwingi Central had 25 farmers, Mwingi West 15 farmers, Mwingi North 30 farmers and Kitui West Sub-County 15 farmers a total of 80 dairy goat farmers bleeding 1000 goats and below as the population. The researcher randomly picked a sample size according to Krejcie and Morgan tables to determine sample size for the 80 small scale dairy goat farmers.

### **3.4.2 Sampling Procedure**

The sampling procedure considers various issues which depend on organization type purpose complicity, time constraint and previous research in the area. A representative sample is chosen by use of a stratified sampling technique. Here, the population is divided into a more homogeneous sub population called strata. Further selection of items is done from each stratum to present each sample. According to Kothari (2009) stratified sampling results are more reliable and give detailed information. The stratas were the four sub counties selected for the study.

### **3.5 Data Collection Instruments**

Collection of data is a methodical method of collecting and reading particular statistics to proffer answers to relevant questions and compare the effects. It makes a specialty of locating out all there's to a selected difficulty count number. Statistics are gathered to be similarly subjected to hypothesis checking out which seeks to provide an explanation for a phenomenon. To acquire data, a questionnaire was mostly employed. This tool aids in the collection of preliminary quantitative data. The questionnaire was created in order to meet the study's objectives. This is a way of gathering data using a tool and a sequence of questions and activities to elicit a reaction from the people who are exposed to it. Questionnaires are employed to collect data from a large group of people. It's crucial to understand that a questionnaire isn't the same as a survey; rather, it's a component of one. A survey is a method of obtaining data that uses a variety of data collection tactics, including a questionnaire. There are three types of questions on a questionnaire. Fixed-opportunity, scale, and open-ended are the three options. Each question is specifically tailored to the research's nature and scope.

The researcher should know how the acquired data was examined, according to Mugenda & Mugenda (2003). Closed-ended questions were used in the survey, which was given to small-scale dairy goat producers. A questionnaire is useful in a study because it allows researchers to

contact a large number of people in a short period of time. It also allows respondents enough time to complete a questionnaire; it ensures the security and confidentiality of the information supplied; and it is a very objective procedure since no personal qualities influence the outcomes (Owens, 2002).

The observation approach is especially important since the knowledge gained this way is current, meaning there are no complications from previous conduct, future plans, or altitude. Second, if an observation is done correctly, data is not exposed to bias. Third, because it is independent of respondents' desire to reply, as is the case with interviews and questionnaire techniques, this method restricts both the respondents' and the researcher's collaboration. This method is appropriate for individuals who are unable to express their feelings verbally for various reasons (Kothari, 2009). Secondary data was obtained from the library, journals, the World Wide Web, and print media.

### **3.5.1 Pilot Study**

A pilot study was undertaken to assess the research questionnaires' validity and reliability. Because the pre-test covers 20% of the sample population (Kothari, 2004), the pilot research, which was conducted among small-scale dairy goats in Makueni County, included 16 questionnaires.

### **3.5.2 Validity of the Instruments**

According to Mugenda and Mugenda (2003), validity is a measure of how accurate and relevant the conclusions drawn from the study results are. It expresses the degree to which the research findings accurately reflect the subject under investigation. The validity of the study tools was assessed using content validity. The questionnaire's content validity was established by peer review and examination by investigation experts, comprising of research supervisors, to verify that the content is acceptable and relevant to the investigation.

### 3.5.3 Reliability of the Instruments

The capacity of a investigation equipment to produce the same result again and over is characterized as reliability. It was concerned with the consistency and dependability of study findings, as well as the test's stability. The basic goal of dependability is to allow researchers to spot uncertainties and insufficient things in the study tool, if they exist. The dependability was assessed using the test-retest approach. Six farmers were given comparable questionnaires, with the other six receiving those six days later. The exam is given to the same farmers twice: once in Mwingi town's central location and again on their fields. The information gathered in both cases was used to assess the consistency of the questionnaire replies over time. When the spearman's rank correlation coefficient is greater than 0.8, it indicates a very strong positive relationship or a high similarity between the first and second sets of questionnaire responses, indicating that the instrument is highly reliable and consistent in answering the study's research questions, and it also indicates that the instrument is certain at 80 percent reliability.

**Table 3.1 Reliability Results**

<b>Objective</b>	<b>Alpha value</b>	<b>Number of items</b>
Performance of dairy goats projects	0.783	4
Logical framework	0.811	3
Gantt charts	0.702	4
Routine monitoring	0.815	4
Project performance indicators	0.753	4

The reliability of the performance of dairy goat projects was 0.783 using Cronbach's alpha test of reliability; the logical framework was 0.811; the reliability of the Gantt charts was 0.702; the reliability of the routine monitoring was 0.815; and the reliability of the project performance indicators was 0.753, according to the pilot results. Cronbach's alpha of above 0.7, according to Sekaran and Bougie (2011), is regarded good. Because all of the research objects had an alpha test result greater than 0.70, they were deemed dependable.



### **3.6 Data collection procedure**

Before beginning data collection, the University of Nairobi provided a letter of introduction, which was given to the respondents together with the data collection instrument, which in this case was a questionnaire. The researcher also has to seek permission from the local administration in Kitui County. The researcher then employed two or three research assistants to assist in collecting data. They were inducted on the objectives of the study. They were trained on the administration of research instruments.

Questionnaires used were well structured using closed questions which provide quantitative data. Tentatively, this investigation utilized both secondary and primary data. The questionnaire contains five-section; basic information of the respondents, logical framework influence, organizing and scheduling tasks using Gantt charts, the influence of routine monitoring and influence of indicators, and the performance of small-scale dairy goats.

These questionnaires were administered by the researchers. They were collected the same day or a later date as agreed with the respondents to provide enough time for the respondents to respond at their convenience and give accurate information to the best of their knowledge. If respondents do not know how to read or write, the researcher and the assistants were required to help ensure a high return rate of responses/information.

### **3.7 Data analysis techniques**

The study produced both quantitative and qualitative outcomes. Quantitative data was examined using Statistical Packages for the Social Sciences (SPSS) Version 24. According to Noels (2018), working with data is a tough and time-consuming process, but the SPSS application can easily handle and operate information with the use of numerous techniques to evaluate, convert, and build a typical pattern between distinct data variables. The data was shown using statistical methods such as pie charts, tables, and bar graphs. Descriptive statistics,

on the other hand, were utilized to analyze qualitative data. Descriptive statistics help to rationally simplify massive volumes of data. Each descriptive statistic condenses a large amount of information into a concise summary (Trochim, 2020). The information was presented using descriptive statistics like means and standard deviation. According to Mugenda & Mugenda (2003), the obtained data must be cleaned and coded. Data analysis entails computer-assisted data coding and entry. In order to determine if the outcomes of the data analysis answer the study questions, common statistical approaches are applied. The gathered raw data is analyzed using descriptive data statistics and content analysis. The data is analyzed using the SPSS version 20 computer program. The outcomes of the analysis were then presented in tables and graphs depending on the main study issues. The content analysis approach was used to examine qualitative data gathered through observation by categorizing it into patterns and themes that were then provided alongside the quantitative results. The connection between the independent factors and the dependent variable was investigated using regression analysis. With the help of SPSS Version 20.0, the data was examined. The regression model used is as indicated;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where;

**Y** Represents performance of dairy goats' project

**$\alpha$**  Represents Constant

**$\beta_1, \beta_2, \beta_3, \beta_4$**  Represents coefficients of independent variables

**$X_1$**  Represents logical framework

**$X_2$**  Represents Gantt chart

**$X_3$**  Represents routine monitoring

**$X_4$**  Represents indicators formulation

**$\epsilon$**  Represents Error term

The outcomes of data analysis were presented by use of tabulation.

The connection between the impartial and structured variables must be linear to be linear. The assumption of linearity will be checked using a scatter plot and correlation. For starters, linear regression requires a linear connection between the unbiased and based variables. Because linear regression is sensitive to outlier implications, it's also critical to test for outliers. Scatter plots may be used to evaluate the linearity assumption; the following two examples show two scenarios with no and little linearity (Lind et al., 2012). The assumption behind linear regression is that the data has very little linearity. When unbiased variables are overly connected with one another, linearity occurs.

Under the null hypothesis that data follows a regular distribution, normality tests will be performed. A histogram or a predicted possibility (p-p) plot can be used to assess the normality of the data. The residuals might be evaluated using a P-P plot to see if they are focused or rotate around the ordinary distribution line. A decency of match test (for example, the Kolmogorov-Smirnov check) can be used to determine ordinariness, but it should be performed on the residuals themselves (Lind, Marchal & Wathen, 2012). Examining a histogram of the sample statistics to an ordinary possibility curve is a simple way to test for normality. The empirical distribution of the information (the histogram) must be bell-formed and resemble the ordinary distribution.

Multicollinearity, also known as excessive correlation stage exploratory variables, can make documenting a maximum set of exploratory variables for a statistical approach difficult or impossible. The variance inflation factor (VIF) is defined by Cohen et al. (2013) as an index of how much the variance of the character regression coefficient is multiplied in comparison to a scenario in which all predictor variables are out of control, and they consider VIF to be too large and thus no longer suitable. Cut-off points are commonly used to detect whether or not

multicollinearity exists (tolerance fee of much less than 0.10 or a VIF value of above 10) (Lind et al., 2012).

To determine homoscedasticity, the Durbin Watson test was performed. This establishes if the blunders term for one observation and the next has a (linear) connection, which was 2.00, but no association across residuals, therefore approaching close to zero when there is little autocorrelation and beyond 2 when there is a lot of autocorrelation (Lind, Marchal & Wathen, 2012). A scatter plot of residuals vs predicted attributes is a great technique to test for homoscedasticity. If there is a cone-shaped example included in the dissemination, the facts are heteroscedastic.

When the residuals are not equally distributed, autocorrelation arises. To put it another way, the value of  $y(x+1)$  isn't necessarily independent of the price of  $y(x)$ . You can check for autocorrelations with a scatter plot, but you can also use the Durbin-Watson look at the linear regression model for autocorrelations. The null hypothesis that the residuals are not linearly automobile-correlated is tested using Durbin-d Watson's. While  $d$  can count on values among 0 and 4, values round 2 indicate no autocorrelation. Most thumb values of  $1.5 < d < 2.5$  show that there's no car-correlation inside the information. However, the Durbin-Watson takes a look at best analyses linear autocorrelation and simplest among direct associates, that is first order outcomes (Sreevidya & Sunitha, 2011).

### **3.8 Ethical Considerations**

Ethical issues are paramount during research, and these include; voluntary participation, confidentiality and anonymity, informed consent, protection from potential harm, and communication results. Before beginning the study, the researcher requested authorization from the county government's relevant authorities. The researcher introduced the study to the respondents as being solely for academic purpose and that their identities were highly confided.

The participants were not coerced to participate in the study; instead, this was voluntary participation. Any farmer who fails to take part makes it clear that no penalties were levied against them.

The participants were adequately informed about the study's goal. The questionnaire was accompanied by a university cover letter, assuring the responders that the details requested was for academic purposes only. They were given assurances of privacy. Consent forms and cover letters are made available to ensure the protection of any potential harm (including physical, emotional, social, and mental, etc.) whatsoever. Confidentiality and anonymity of farmers were ensured by distributing questionnaires within the highlighted sub-counties and farmers giving them back anonymously.

### 3.9 Operationalization of the variables

**Table 3.2 Operationalization of the variables**

<b>Objectives</b>	<b>Valuables</b>	<b>Indicators</b>	<b>Measurement</b>	<b>Level of scale</b>	<b>Data collection tools</b>	<b>Data analysis technique</b>
	<b>Dependent variable</b>	Performance of small-scale dairy goat farming project Profitability of small-scale dairy goat farming project Satisfaction of the owners Increased number of goats	Querying the small scale dairy farmers on these measurement parameters	Ordinal	Structured questionnaire	SPSS Mean, frequency and percentages
To evaluate the extent to which the use of logical framework influences the performances of small-scale dairy goats farming	<b>Independent Valuables.</b> Logical framework	Analysis of time bound Undertakings to ensure project success Purpose of the dairy goat project Beneficiaries risks and assumptions Project background	Inputs Outputs Outcomes	Nominal	Structured questionnaire	Mean, frequency and percentages
To determine how the use of Gantt charts in scheduling influences performance of small-scale dairy goat farming projects.	Gantt charts	Schedule project task Organize resources to be used during the project Gain understanding of the project and track the project against a given timeline	Actual work progress Resources utilized during the projects	Nominal	Structured questionnaire	Spearman's rank correlation coefficient, frequency and percentages
To establish how routine monitoring influences the performance of small-	Routine performance monitoring	Process monitoring Technical monitoring Financial monitoring	Number of visits by agricultural field officers availability of experts reports to the field officers	Nominal	Structured questionnaire	Mean, frequency and percentages

scale dairy goat farming projects.		Impact monitoring			
To assess extent at which project performance indicators influence performance of small-scale dairy goat farming project	Indicator formulation	Impact indicators Outcome indicators Process indicators Output indicators Impact indicators	Nominal	Structured questionnaire	Mean, frequency and percentage

## CHAPTER FOUR

### DATA ANALYSIS, FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

The investigation aimed to look into the monitoring and evaluation tools used by farmers in Kitui County to assess the efficacy of dairy goat programs. It was conducted among dairy goat farmers on a limited basis. This chapter examines the study's demographic data as well as the study's specific aims. The chapter also includes a correlation and multiple regression model analysis, as well as a discussion of the findings.

#### 4.2 General Information of the Respondents

The goal of this study was to learn about the participants' backgrounds, and the outcomes were as follows;

##### 4.2.1 Gender of the Respondents

The gender of the respondents was determined by the researcher, and the outcomes are shown in Table 4.1.

**Table 4.1 Gender of the Respondents**

<b>Gender of the Respondents</b>	<b>Frequency</b>	<b>Percentage</b>
Male	40	52
Female	37	48
<b>Total</b>	<b>77</b>	<b>100</b>

Table 4.1 shows that 52.0 percent (40) of the participants were male and 48.0 percent (37) were female. This implies that the investigation was able to mitigate the effects of gender bias by collecting data from persons of all genders and ensuring that the facts acquired mirrored both genders' complaints. As a result, there were no discrepancies in percentage composition within the distribution. The impact of gender on the successful implementation of an organization's



policy, application, and task goals has a direct impact on the technique of social development. Gender has an important part in people's and societies' economic, social, every day, and private lives, as well as the varied duties assigned by society to women and men, which is why they want both genders in organizations (Lambert et al., 2008).

#### 4.2.2 Age of the Respondents

The researcher was looking for people of all ages. The findings are shown in Table 4.2.

**Table 4.2 Age of the Respondents**

Age	Frequency	Percentage
Below 30 years	22	28.8
31-40 years	19	25.2
41-50 years	20	25.9
Above 50 years	16	20.1
Total	77	100

According to table 4.1, 28.8 percent (22) of the respondents were under the age of 30, 25.2 percent (19) were between the ages of 31 and 40, 25.9 percent (20) were between the ages of 41 and 50, and 20.1 percent (16) were beyond the age of 50. This means that the researcher was able to obtain data from people of various ages that represented the views of people of all ages. Taneva, Arnold and Nicolson (2016) highlights that studying about age-associated changes in older workers' processes to paintings can also shed more mild on the which means of a hit personal strategies for older workers as well as the function of these techniques in managing overdue careers. This could permit a deeper know-how of overdue careers and its underlying tactics, which in turn will stimulate practical character and organizational solutions with a focus on overdue careers' successful management.

#### 4.2.3 Family Size

The study sought to determine the family size of small scale farmers who participated in the study and the outcomes were as presented.

**Table 4.3: Family Size**

<b>Family Size</b>	<b>Frequency</b>	<b>Percent</b>
Less than 3	12	15.9
3-5	36	46.9
More than 5	29	37.2
<b>Total</b>	<b>77</b>	<b>100</b>

The findings showed that 15.9% (12) of the participants had less than 3 members in the family, 46.9% (36) of the participants had 3-5 members in the family, and 37.2% (29) of the participants had more than 5 members in the family. This revealed that investigation gathered data from varied family sizes and therefore the study results echo the opinions of the several durations of varied family sizes.

#### **4.2.4 Highest Level of Education**

The investigation aimed to find out how respondents were distributed based on their greatest level of education, and the outcomes are shown in Table 4.4.

**Table 4.4 Highest Level of Education of the Respondents**

<b>Highest Educational Level</b>	<b>Frequency</b>	<b>Percent</b>
Secondary level	8	10.2
College Level	31	40.0
Undergraduate	31	39.8
Masters	8	10.0
<b>Total</b>	<b>77</b>	<b>100</b>

According to Table 4.4, 10.2 percent of the respondents (eight) had a secondary education. 40.0 percent (31) had a college diploma, 39.8% (39.8) had an undergraduate degree, and 10.0 percent (8) had a master's degree. This implies that the respondents were informed about the

research questions and so understood them, and it will be assumed that they offered an accurate and fair assessment of the study questions.

#### 4.2.5 Religion

The study focused on people of various religious backgrounds. The findings are shown in Table 4.5.

**Table 4.5 Religion**

<b>Religion</b>	<b>Frequency</b>	<b>Percentage</b>
Christians	62	81.0
Muslims	15	19.0
<b>Total</b>	<b>77</b>	<b>100.0</b>

According to table 4.5, 81.0 percent (62) of the respondents were Christians, whereas 19.0 percent (15) of the respondents were Muslims. This can be construed to suggest that Christians made up the majority of the responders.

#### 4.2.6 Years of Practicing this Small-Scale Goat Farming

The investigation aimed to determine the distribution of respondents based on how long they had been practicing small-scale goat farming, and the outcomes are shown in Table 4.6.

**Table 4.6 Years of Practicing this Small-Scale Goat Farming**

<b>Years of Practicing</b>	<b>Frequency</b>	<b>Percent</b>
Less than 1 year	8	10.8
More than 2 years	31	40.8
More than 3 years	37	48.4
<b>Total</b>	<b>77</b>	<b>100</b>

According to table 4.6, 10.8 percent (8) of respondents have been doing small-scale goat farming for less than a year, 40.8 percent (31) have been doing small-scale goat farming for more than two years, and 48.4 percent (37) have been doing small-scale goat farming for more

than three years. This indicates that the majority of the respondents have been small-scale goat farmers for at least three years, and the study collected data from all of the respondents who have been small-scale goat farmers for at least three years.

#### 4.2.7 Number of Goats Reared First Time

Further, the goal of the research was to find out the number of dairy goats the farmers started rearing the first time and the outcomes were as presented in Table 4.7.

**Table 4.7 Number of Goats Reared First Time**

<b>Number of Goats</b>	<b>Frequency</b>	<b>Percent</b>
Less than 50	38	49
Less than 100	12	15
Less than 200	28	36
<b>Total</b>	<b>77</b>	<b>100</b>

From table 4.7, the investigation findings showed that 49.0% (38) of the farmers reared less than 50 goats for the first time; 15.0% (12) of the farmers reared less than 100 goats for the first time whereas 36.0% (28) of the farmers reared less than 200 goats for the first time.

#### 4.2.8 Number of Goats Reared Currently

The goal of the research was to find out the number of dairy goats the farmers are rearing currently and the outcomes were as presented in Table 4.8.

**Table 4.8 Number of Goats Reared Currently**

<b>Number of Goats</b>	<b>Frequency</b>	<b>Percent</b>
Less than 200	39	51
200 - 400	19	25
More than 400	18	24
<b>Total</b>	<b>77</b>	<b>100</b>

From table 4.7, the investigation findings showed that 51.0% (51) of the farmers are rearing less than 200 goats currently; 25.0% (25) of the farmers are rearing 200 - 400 goats currently whereas 24.0% (18) of the farmers are rearing more than 400 goats currently.

#### **4.2.9 Status of the Goat Farming**

The goal of the research was to find out the status of dairy goat farming and the outcomes were as presented in Table 4.9.

**Table 4.9 Status of the Goat Farming**

<b>Status of the Goat Farming</b>	<b>Frequency</b>	<b>Percentage</b>
Full time farming	47	61.0
Part-time farming	30	39.0
Total	77	100.0

From table 4.9, the investigation findings showed that 61.0% (47) of the farmers practiced goat farming on full time while 39.0% (30) of the farmers practiced goat farming on part-time. This can be interpreted to mean that the majority of the farmers practiced goat farming full time.

#### **4.3 Performance of Small-Scale Dairy Farming Projects**

The study aimed to survey the best description of performance of small-scale dairy farming projects. The findings of study were as revealed in Table 4.10.

**Table 4.10: Performance of Small-Scale Dairy Farming Projects**

Statements		SD	D	U	A	SA	Total	Mean	Std Dev
There are an increased number of goat kids and bucks have been realized.	F	3	5	7	34	28	77	4.00	1.187
	%	4.2	6.5	9.2	44.2	35.9	100	80.0	
Small scale dairy farmers are satisfied with their farming.	F	3	9	5	28	33	77	3.55	0.969
	%	3.8	11.1	6.1	36.4	42.6	100	71.0	
Much profit accrues to the small-scale dairy farmers.	F	4	5	10	37	21	77	3.75	0.764
	%	5.6	6.3	12.6	48.5	27	100	75.0	
Small scale dairy farming performs highly.	F	8	12	10	23	23	77	3.56	0.606
	%	10.8	15.9	12.4	30.5	30.4	100	70.2	
Composite mean								3.73	

**Key:** SD = Strongly Disagree; D= Disagree; U = Undecided; SA = Strongly Agree; A = Agree;

F = Frequency

The investigation results on the best description of the performance of small-scale dairy farming projects found out that 80.0% (mean=4.00) opined that there is an increased number of goat kids and bucks has been realized, 71.0% (mean=3.55) opined that small scale dairy farmers are satisfied with their farming, 75.0% (mean=3.75) were of the opinion that much profit accrues to the small-scale dairy farmers, and that 70.2% (mean=3.56) were of the opinion that small scale dairy farming performs highly.

#### **4.4 Logical framework and Performance of small-scale dairy farming projects**

In the first objective, the study aimed to establish the effect of logical framework on performance of small-scale dairy farming projects. The responses of study were as in Table 4.11.

**Table 4.11: Logical framework**

<b>Statements</b>		<b>SD</b>	<b>D</b>	<b>U</b>	<b>A</b>	<b>SA</b>	<b>Total</b>	<b>Mean</b>	<b>Std Dev</b>
Time is very essential factor which influence the success of small-scale dairy goat farming	F	4	7	12	33	22	77	4.52	1.165
	%	5	8.6	15.9	42.4	28.1	100	90.4	
A lot of undertakings are involved in this farming	F	4	8	11	30	23	77	4.51	0.275
	%	5	10.8	14.4	39.6	30.2	100	90.2	
The project has a specific purpose for its establishment	F	0	2	11	48	17	77	4.48	0.450
	%	0	2.2	13.7	61.8	22.3	100	89.6	
The beneficiaries have risks and assumptions about this farming	F	4	6	13	22	32	77	4.28	0.277
	%	5	7.9	17.3	28.1	41.7	100	85.6	
The project background is paramount for the success of small-scale dairy goat farming	F	0	2	12	33	30	77	3.80	1.047
	%	0	2.2	15.1	43.2	39.5	100	76.0	
<b>Composite mean</b>								<b>4.32</b>	

**Key:** SD = Strongly Disagree; D= Disagree; U = Undecided; SA = Strongly Agree; A = Agree;

F = Frequency

The study results on the effect of logical framework on performance of small-scale dairy farming projects showed that (mean=4.52) 90.4% opined that time is very essential factor which influence the success of small-scale dairy goat farming, 90.2% (mean=4.51) were of the opinion that a lot of undertakings are involved in this farming, 89.6% (mean=4.48) were of the opinion that the project has a specific purpose for its establishment, 85.6% (mean=4.28) were of the opinion that the beneficiaries have risks and assumptions about this farming while 76.0% (mean=3.80) were of the view that the project background is paramount for the success of small-scale dairy goat farming.

According to the study's findings, the majority of participants believe that the logical framework assists the organization in planning, directing, and controlling operating expenditures. With the goal of providing selection makers with higher and greater applicable statistics, a logical framework ensures that vital questions are asked and shortcomings are examined. It teaches how to evaluate the interconnected essential aspects that make up a well-

designed task in a methodical and logical way. Standardized approaches to gathering and evaluating records benefit management and administration.

These investigation results are in accordance with results by Yang (2018) who argued that LFA must be notion of as a ‘resource to wondering’. it lets in facts to be analyzed and organized in an established way, in order that crucial questions may be requested, weaknesses identified and choice makers can make informed choices based on their improved information of the undertaking rationale, it’s supposed objectives and the way through which targets can be completed.

#### 4.5 Gantt Charts

In the second objective, the study determined the effect of Gantt charts on performance of small-scale dairy farming projects. The study findings were tabulated in 4.12.

**Table 4.12: Gantt Charts**

Statements		SD	D	U	A	SA	Total	Mean	StdDev
Project tasks should be schedule to ensure success	F	4	8	10	31	23	77	3.80	1.047
	%	5.3	10.6	13.5	40.1	30.5	100	76.0	
Resources required for the success of the project should be organized	F	3	9	12	47	6	77	3.79	1.074
	%	4.4	12.2	15.1	60.4	7.9	100	75.8	
Gaining an understanding of the project and tracking the project against a given time is paramount	F	4	11	11	43	9	77	4.04	0.342
	%	4.9	14.2	14.1	55.6	11.2	100	80.8	
<b>Composite mean</b>								<b>3.98</b>	

**Key:** SD = Strongly Disagree; D= Disagree; U = Undecided; SA = Strongly Agree; A = Agree;

F = Frequency

The outcomes of the study found out that 76.0% (mean=3.80) viewed that project tasks should be schedule to ensure success, 75.8% (mean=3.79) were of the view that resources required for the success of the project should be organized, and that 80.8% (mean=4.04) were of the view



that gaining an understanding of the project and tracking the project against a given time is paramount.

These findings revealed that the majority of respondents stated that getting a thorough grasp of the project and tracking it against a deadline was critical. This can be interpreted to mean that there is a need for description of the resources required to put in force an initiative and planned mission undertakings in a spreadsheet or calendar format. Because Gantt charts describe the timing and collection of key mission occasions (which includes receiving permissions to continue with a task, hiring workforce, and securing gadget) they can offer a basis for growing enter signs that music whether or not an assignment is attaining task milestones in step with the original timetable.

These results are in consonance with results by Stellman and Greene (2005) who opined that the project manager first needs to understand all the tasks that make up a project, come up with people responsible for each task, and allocate timelines. Possible challenges during the project should also be captured. This thorough thinking ensures that the project is workable and ensures that the right people are allocated the right tasks and ensure solutions for possible problems before the project kicks off.

#### 4.6 Routine Monitoring

In the third objective, the study aimed to survey the effect of routine monitoring on performance of small-scale dairy farming projects. The findings of study were as revealed in Table 4.13.

**Table 4.13: Routine Monitoring**

Statements		SD	D	U	A	SA	Total	Mean	Std Dev
Several processes involved should be monitored to ensure success.	F	3	5	7	34	28	77	4.00	1.187
	%	4.2	6.5	9.2	44.2	35.9	100	80.0	
Supervision of technical know-how guarantees productivity.	F	3	9	5	28	33	77	3.55	0.969
	%	3.8	11.1	6.1	36.4	42.6	100	71.0	
	F	4	5	10	37	21	77	3.75	

Financial involvement at every stage should be monitored to yield profitability.	%	5.6	6.3	12.6	48.5	27	100	75.0	
The impact of the project should be regularly assessed to yield success.	F	8	12	10	23	23	77	3.56	0.606
	%	10.8	15.9	12.4	30.5	30.4	100	70.2	
Composite mean								3.73	

**Key:** SD = Strongly Disagree; D= Disagree; U = Undecided; SA = Strongly Agree; A = Agree; F = Frequency

The investigation results on the effect of routine monitoring on performance of small-scale dairy farming projects found out that 80.0% (mean=4.00) opined that several processes involved should be monitored to ensure success, 71.0% (mean=3.55) opined that supervision of technical know-how guarantee productivity, 75.0% (mean=3.75) were of the opinion that financial involvement at every stage should be monitored to yield profitability, 70.2% (mean=3.56) were of the opinion that the impact of the project should be regularly assessed to yield success and that 76.0% (mean=3.80) were of the view that routine monitoring is done mainly with an aim of adhering to government regulations.

These findings revealed that the majority of the respondents believed that several processes involved should be monitored to ensure success. Project monitoring is keeping track of all project-related data, such as team performance and task length, identifying potential issues, and taking corrective action to maintain the project on track, on budget, and on schedule. Simply put, project monitoring means overseeing all activities and keeping a close eye on project operations in order to guarantee that the project runs well. The process of project monitoring begins at the planning phase of a project. During this phase, it's vital to explain how the project will succeed and how the goals will be tracked using key performance indicators.

Mariangela et al., (2010) supported these findings by showing that routine monitoring development on projects' performance is essential since it ensures that the needs of small

ruminants like sheep and goats are catered for at the farm level. The outcome of assessment carried out at the farm level could be used to quantify the impact of different husbandry conditions on animals. It is essential to increase the animals' quality and hygienic standards.

#### 4.7 Project Monitoring Indicators

In the fourth objective, the study determined the effect of project monitoring indicators on performance of small-scale dairy farming projects. The responses of the study were as in Table 4.14.

**Table 4.14: Project Monitoring Indicators**

Statements		SD	D	U	A	SA	Total	Mean	Std Dev
Impact indicators should be considered to determine the project success	F	3	2	6	31	35	77	4.52	1.165
	%	4.1	2.6	7.6	40.4	45.3	100	90.4	
Essential input resources should be considered to counter challenges beforehand	F	3	9	6	25	33	77	4.51	0.275
	%	4.3	11.9	7.8	32.5	43.5	100	90.2	
The performance of the project should be duly tracked using process indicators	F	2	2	4	28	41	77	4.48	0.450
	%	2.9	2.3	5.2	36.4	53.2	100	89.6	
Outcome indicators describe the delivery of products and create standards to guarantee profitability	F	8	13	15	39	2	77	4.28	0.277
	%	10.8	16.5	20.1	50.4	2.2	100	85.6	
<b>Composite mean</b>								<b>4.45</b>	

**Key:** SD = Strongly Disagree; D= Disagree; U = Undecided; SA = Strongly Agree; A = Agree;

F = Frequency

The study results on the effect of project monitoring indicators on performance of small-scale dairy farming projects showed that 90.4% (mean=4.52) opined that impact indicators should be considered to determine the project success, 90.2% (mean=4.51) were of the opinion that essential input resources should be considered to counter challenges beforehand, 89.6% (mean=4.48) were of the opinion that the performance of the project should be duly tracked

using process indicators, 85.6% (mean=4.28) were of the opinion that outcome indicators describe the delivery of products and create standards to guarantee profitability.

The outcomes showed that the majority of the participants viewed that impact indicators should be considered to determine the project success. Performance indicators are monitored during the implementation of a project to measure progress toward the project's objectives. They're also used to evaluate a project's performance in the future. Indicators organize data in a way that highlights the connections between a project's effects, outcomes, outputs, and inputs, as well as aiding in the discovery of obstacles that may block the project's completion. Activity indicators are critical for determining the extent to which a project was delivered according to plan and identifying implementation roadblocks. Activity indicators are useful project management tools because they describe the many project components in clear and quantitative terms, including the resources necessary and persons accountable for certain activities.

The benefits of indicators, according to Cama, Broady, Brener, Hopwood, de Wit, and Treloar (2018), stem from their measurability and direct derivation from project objectives, which are based on sector, economic, risk, and beneficiary analyses. Indicators relate the inputs and activities of a project to quantitative measurements of projected outcomes and effect. Before choosing indicators, the borrower or project implementation unit, as well as the Bank, must examine which performance measurements will inform them whether and how a project's intended objectives are being met, as well as who would benefit, allowing for a more exact characterization of the goals..

#### **4.8 Correlation Analysis**

The link between the research variables was investigated using Pearson correlation analysis. The investigation's conclusions are described in Table 4.15.

**Table 4.15 Relationship between Study Variables**

		Logical framework	Gantt chart	Routine performance monitoring	Project monitoring indicators
Logical framework	Pearson Correlation Sig. (2-tailed)	1			
Gantt chart	Pearson Correlation Sig. (2-tailed)	.580**	1		
Routine performance monitoring	Pearson Correlation Sig. (2-tailed)	0.407	0.104	1	
Project monitoring indicators	Pearson Correlation Sig. (2-tailed)	.697	.853	.533	1
Performance of small-scale dairy farming projects	Pearson Correlation Sig. (2-tailed)	.622**	.631**	.411**	.597**
	N	77	77	77	77

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

The outcomes of the investigation found that there was a statistically positive significant result was found correlation between logical frameworks on the performance of small-scale dairy farming projects ( $r=0.622$ ,  $p<0.05$ ). This can be interpreted to mean that a unit change in a logical framework leads to a 62.2% change in the performance of small-scale dairy farming projects. When the logical framework is positive, the performance of small-scale dairy farming projects is also positive. Therefore, Small-scale dairy farmers should promote and enhance logical framework as a positive element as they work towards achieving the performance of small-scale dairy farming projects.

The outcomes of the investigation found that there was a statistically positive significant result was found effect of the Gantt chart on the performance of small-scale dairy farming projects ( $r=0.631$ ;  $p<0.05$ ). This showed that a unit change in Gantt chart leads to a 63.1% change in

the performance of small-scale dairy farming projects. When the Gantt chart is positive, the performance of small-scale dairy farming projects is also positive. Therefore, Small-scale dairy farmers should ensure that the Gantt chart is practiced and hence work towards achieving the performance of small-scale dairy farming projects.

The outcomes of the investigation found that there was a statistically positive significant result was found effect of routine performance monitoring on the performance of small-scale dairy farming projects ( $r=0.411$ ;  $p<0.05$ ). This can be interpreted to mean that a unit change in routine performance monitoring leads to a 41.1% change in the performance of small-scale dairy goat farming projects. When routine performance monitoring is positive, the performance of small-scale dairy goat farming projects is also positive. Therefore, Small-scale dairy farmers should view routine performance monitoring as a positive element as they work towards achieving the performance of small-scale dairy farming projects.

The outcomes of the investigation found that there was a statistically positive significant result was found effect of project monitoring indicators on the performance of small-scale dairy goat farming projects ( $r=0.597$ ;  $p<0.05$ ). This can be interpreted to mean that a unit change in project monitoring indicators leads to a 59.7% change in the performance of small-scale dairy goat farming projects. When project monitoring indicators are positive, the performance of small-scale dairy farming projects is also positive. Therefore, small-scale dairy farmers should promote and enhance these project monitoring indicators as they work towards achieving the performance of small-scale dairy farming projects.

#### **4.9 Multiple Regression Model Analysis**

To evaluate the correlations between the study variables, the researchers used multiple regression model analysis. Table 4.16 summarizes the findings of the investigation.

**Table 4.16 Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>F</b>	<b>Sig.</b>
<b>1</b>	.802 <sup>a</sup>	0.845	0.879	0.0879	112.668	0.000 <sup>b</sup>

The simple correlation, according to the model, was 0.802, indicating a degree of association. The entire variance in the performance of small-scale dairy farming projects (the modified R<sup>2</sup> of the study model is 0.845 with the R<sup>2</sup> = 0.879) was 87.9% explained by investment planning techniques (R Square=0.879, Standard Error=0.068). This suggests that the linear regression accounts for 80.2 percent of the data variance. This means that the multiple linear regression data has no first-order linear auto-correlation. This means that investment planning strategies in the research explain 87.9% of the variance in performance of small-scale dairy farming projects, whereas other factors account for 12.1% of the difference in performance of small-scale dairy farming projects. The multiple regression model was tested using analysis of variance to see if it suited the data. Table 4.17 shows the outcomes.

**Table 4.17 ANOVA Model**

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>1</b>	Residual	102.882	4	19.015	112.668	0.000 <sup>b</sup>
	Regression	9.232	73	0.16893		
	<b>Total</b>	<b>112.114</b>	<b>77</b>			

The null hypothesis in the linear regression F-test is that the model explains no variance in the performance of small-scale dairy farming operations (F=112.668, p=0.000b). Because the F-test is highly significant, it is considered that the model explained a considerable portion of the variation in small-scale dairy farming project performance. This indicates that the data was suited for the multiple regression models, and therefore the logical framework, Gantt charts,

routine performance monitoring, and project monitoring indicators have an impact on the performance of small-scale dairy goat farming operations.

The study's findings also demonstrated that the model summary accurately predicted the success of small-scale dairy goat farming enterprises ( $p < 0.05$ ). This revealed the regression model's statistical significance, and that the regression model statistically substantially predicted the success of small-scale dairy farming enterprises overall (that is, it was a good fit for the data). Table 4.18 summarizes the findings of the investigation.

**Table 4.18 Regression Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std Error	Beta	t	Sig.
(Constant)	0.323	0.224		1.648	0.105
Logical framework	0.182	0.026	0.319	6.604	0.000
Gantt chart	0.272	0.024	0.534	6.745	0.000
Routine performance monitoring	0.229	0.034	0.476	8.866	0.000
Project monitoring indicators	0.216	0.046	0.253	6.354	0.000

The regression equation generated for the study was as follows.

$Y$  (Performance of small-scale dairy goat farming projects) = 0.323 (Constant) + 0.182 (Logical framework) + 0.272 (Gantt chart) + 0.229 (Routine performance monitoring) + 0.216 (project monitoring indicators) + 0.224 (Std Error).

From the regression equation, Gantt chart to performance of small-scale dairy goat farming projects contributed 27.2% to performance of small-scale dairy goat farming projects while logical framework contributed 32.3%, routine performance monitoring contributed 22.9% and project monitoring indicators contributed 21.6% to performance of small-scale dairy goat farming projects respectively.



There was a strong link between logical framework and performance of small-scale dairy goat farming projects ( $\beta=0.182$ ,  $p\leq 0.05$ ); there was a strong link between Gantt chart and performance of small-scale dairy farming goat projects ( $\beta=0.272$ ,  $p\leq 0.05$ ); there was a strong link between routine performance monitoring and performance of small-scale dairy goat farming projects ( $\beta=0.229$ ,  $p\leq 0.05$ ) and that there was a strong link between project monitoring indicators and performance of small-scale dairy goat farming projects ( $\beta=0.216$ ,  $p\leq 0.05$ ).

The regression function in the equation above was used to explain the outcomes of the regression model analysis.

$$Y = 0.323 + 0.182X_1 + 0.272X_2 + 0.229X_3 + 0.216X_4$$

The logical framework coefficient parameter is 0.182, which means that changing one unit of logical framework results in a 0.182 change in performance of small-scale goat dairy farming projects while keeping the remaining variables constant. The coefficient parameter of a Gantt chart is 0.272, which means that if one unit of the Gantt chart is changed, the performance of small-scale dairy goat farming projects changes by 0.272 while the remaining variables remain constant. The routine performance monitoring coefficient parameter is 0.229, which means that for every change in one unit of routine performance monitoring, a 0.229 change in small-scale dairy goat farming project performance will be expected, with all other factors held constant. The coefficient parameter for project monitoring indicators is 0.216, which means that for every unit change in project monitoring indicators, a 0.216 change in performance of small-scale dairy goat farming operations will be expected, with all other factors held constant.

#### **4.10 Hypotheses Testing**

The first hypothesis was;

**H<sub>01</sub>:** Logical framework has no significant effect on performance of small-scale dairy goat farming projects in Kitui County. The outcomes of the investigation revealed that there was a

statistically significant link between the logical framework and performance of small-scale dairy goat farming projects ( $p=0.000$ ). Comparing  $p=0.000$  with the  $p<0.01$ , As a consequence, the alternative hypothesis was accepted and the null hypothesis was rejected , which revealed a link between logical framework and performance of small-scale dairy goat farming projects in Kitui County.

The second hypothesis was;

**H<sub>02</sub>:** Gantt chart has no significant effect on performance of small-scale dairy goat farming projects in Kitui County. The outcomes of the investigation revealed that there was a statistically significant link between the Gantt chart and performance of small-scale dairy goat farming projects ( $p=0.000$ ). Comparing  $p=0.000$  with the  $p<0.01$ , As a consequence, the alternative hypothesis was accepted and the null hypothesis was rejected , which revealed a link between Gantt chart and performance of small-scale dairy goat farming projects in Kitui County.

The third hypothesis of the study was;

**H<sub>03</sub>:** Routine performance monitoring has no significant effect on performance of small-scale dairy goat farming projects in Kitui County. The outcomes of the investigation revealed that there was a statistically significant link between routine performance monitoring and performance of small-scale dairy goat farming projects ( $p=0.000$ ). Comparing  $p=0.000$  with the  $p<0.01$ , As a consequence, the alternative hypothesis was accepted and the null hypothesis was rejected , which revealed a link between routine performance monitoring and performance of small-scale dairy goat farming projects in Kitui County.

The fourth hypothesis was;

**H<sub>04</sub>:** Project monitoring indicators have no significant effect on performance of small-scale dairy goat farming projects in Kitui County. The outcomes of the investigation revealed that

there was a statistically significant link between project monitoring indicators and performance of small-scale dairy goat farming projects ( $p=0.000$ ). Comparing  $p=0.000$  with the  $p<0.01$ , As a consequence, the alternative hypothesis was accepted and the null hypothesis was rejected , which revealed a link between project monitoring indicators and performance of small-scale dairy goat farming projects in Kitui County.

**Table 4.19 Summary of Test of Hypotheses**

Hypothesis	Statement	Sig.	Result
H <sub>01</sub> :	Logical framework has no significant effect on performance of small-scale dairy goat farming projects in Kitui County.	0.000	Reject Null hypothesis
H <sub>02</sub> :	Gantt chart has no significant effect on performance of small-scale dairy goat farming projects in Kitui County.	0.000	Reject Null hypothesis
H <sub>03</sub> :	Routine performance monitoring has no significant effect on performance of small-scale dairy goat farming projects in Kitui County.	0.000	Reject Null hypothesis
H <sub>04</sub> :	Project monitoring indicators have no significant effect on performance of small-scale dairy goat farming projects in Kitui County.	0.000	Reject Null hypothesis

#### 4.10 Discussions of Findings

Stellman and Greene (2005) opined that the project manager first needs to understand all the tasks that make up a project, come up with people responsible for each task, and allocate timelines. Possible challenges during the project should also be captured. This thorough thinking ensures that the project is workable and ensures that the right people are allocated the right tasks and ensure solutions for possible problems before the project kicks off.

Parsons et al., (2013) found that process indicators are essential to understand how a project was executed as planned and points out obstacles to implementation. Activity indicators are

critical project management tools when they describe the various components of a project in specific and measurable terms detailing the resources required and assigning tasks to various individuals involved. They are most significant as they explain the relationship between a given set of undertakings and the expected outcome. Process indicators must contain critical ingredients for the success of a project (Parsons, Gokey, & Thornton, 2013).

Indicators are valuable because they are measurable and because they are derived directly from project objectives, which are based on sector, economic, risk, and beneficiary analyses, according to Cama, Broady, Brener, Hopwood, de Wit, and Treloar (2018). Indicators link a project's inputs and activities to quantitative assessments of expected outcomes and effects. Before deciding on indicators, the borrower or project implementation unit, as well as the Bank, must consider which performance measures will help them determine whether and how a project's planned objectives are being met, as well as who will benefit—helping to define the objectives more precisely.

Mariangela et al., (2010) showed that routine monitoring development on projects' performance is essential since it ensures that the needs of small ruminants like sheep and goats are catered for at the farm level. The outcomes of farm-level assessments could be utilized to quantify the impact of various husbandry conditions on animals. It is critical to improve the quality and hygiene standards of the animals.

According to Milika (2011) logical evaluation enables decision makers, managers, and other project stakeholders to exchange information and communicate more effectively, as well as providing management and administration with standardized data collection and analysis techniques.

According to Leuzzi (2013), the components of a logical framework matrix based on dreams, reasons, and mission undertakings that can be itemized inside the logical framework matrix are

a crucial component of the logical body. When planning, enforcing, and comparing specific projects and programs inside a motion plan, the logframe is used.

Businge (2010) in Uganda's Ruwenzori area, with the unit of analysis being individuals in the top positions of each organization. Contributors rarely work outside of the log frame method, which places mission initiatives at the center of the frame, according to the study. They are, however, constrained by the logical framework of the assignment, and events on the ground may occasionally affect the fulfillment of some of the activities, prompting the adjustment of certain components of the project in terms of objectives. It was decided that any proposed adjustments by the enforcement agencies would be submitted to a thorough side-by-side discussion.

Gantt charts, according to Geraldi and Lechter (2012), are an extremely important tool for project management since they can track the progress of each activity as well as the direction in which the charges are moving. According to Gantt's rules, Gantt charts divide a project into a series of duties and assign each job to a different row along the vertical axis (2008).

Khosrow-pour (2010) noted that the importance of task management integration, which includes project scope control, assignment time control, undertaking fee control, undertaking first-class management, assignment human resources management, undertaking communications control, undertaking threat management, and undertaking procurement control, was cited in the examined outcomes.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary of Findings

The study results on the effect of logical framework on performance of small-scale dairy goat farming projects showed that (mean=4.52) 90.4% opined that time is very essential factor which influence the success of small-scale dairy goat farming, 90.2% (mean=4.51) were of the opinion that a lot of undertakings are involved in this farming, 89.6% (mean=4.48) were of the opinion that the project has a specific purpose for its establishment, 85.6% (mean=4.28) were of the opinion that the beneficiaries have risks and assumptions about this farming while 76.0% (mean=3.80) were of the view that the project background is paramount for the success of small-scale dairy goat farming.

The findings of the study found out that 76.0% (mean=3.80) viewed that project tasks should be schedule to ensure success, 75.8% (mean=3.79) were of the view that needs of performance of small-scale dairy farming projects to include the amount and level of hosting fees, and that 80.8% (mean=4.04) were of the view that gaining an understanding of the project and tracking the project against a given time is paramount.

The investigation results on the effect of routine monitoring on performance of small-scale dairy farming projects found out that 80.0% (mean=4.00) opined that several processes involved should be monitored to ensure success, 71.0% (mean=3.55) opined that supervision of technical know-how guarantee productivity, 75.0% (mean=3.75) were of the opinion that financial involvement at every stage should be monitored to yield profitability, 70.2% (mean=3.56) were of the opinion that the impact of the project should be regularly assessed to yield success and that 76.0% (mean=3.80) were of the view that routine monitoring is done mainly with an aim of adhering to government regulations.

The investigation results on the effect of project monitoring indicators on performance of small-scale dairy farming projects showed that 90.4% (mean=4.52) opined that impact indicators should be considered to determine the project success, 90.2% (mean=4.51) were of the opinion that essential input resources should be considered to counter challenges beforehand, 89.6% (mean=4.48) were of the opinion that the performance of the project should be duly tracked using process indicators, 85.6% (mean=4.28) were of the opinion that outcome indicators describe the delivery of products and create standards to guarantee profitability.

The examination further revealed that there was a significant correlation between logical framework and performance of small-scale dairy farming projects ( $p=0.000$ ); there was a significant correlation between Gantt charts and performance of small-scale dairy farming projects ( $p=0.000$ ); there was a significant correlation between routine monitoring and performance of small-scale dairy farming projects ( $p=0.000$ ) and that that there was a significant correlation between project monitoring indicators and performance of small-scale dairy farming projects ( $p=0.000$ ).

## **5.2 Conclusions**

It was concluded that the logical framework affects performance of small-scale dairy goat farming projects. To give decision makers with enhanced and more relevant information, a logical framework guarantees that essential questions are answered and weaknesses are examined. It directs the methodical and logical examination of the interconnected core aspects that make up a well-designed project. It facilitates planning by drawing attention to the connections between project parts and external influences. A logical framework provides a stronger foundation for systematic project monitoring and analysis. The use of a logical framework allows decision makers, managers, and other project participants to have a better knowledge of the situation and communicate more effectively.

Gantt charts have a substantial association with performance of small-scale dairy farming projects. Gantt charts can be used to develop input indicators that track whether a project is meeting project milestones according to the original schedule because they describe the timing and sequence of key project events (such as receiving permission to proceed with a project, hiring staff, and securing equipment).

According to the findings, frequent monitoring is strongly linked to the success of small-scale dairy farming programs. Routine monitoring ensures that small ruminants such as sheep and goats have their requirements met on the farm. The outcomes of farm-level assessments might be utilized to measure the impact of various husbandry conditions on animals. It is critical to raise the quality and hygiene standards of the animals.

Lastly, the study concluded that project monitoring indicators affects performance of small-scale dairy farming projects. Indicators organize data in a way that highlights the connections between a project's effects, outcomes, outputs, and inputs, as well as aiding in the discovery of obstacles that may block the project's completion. Activity indicators are critical for determining the extent to which a project was completed as intended and for identifying implementation roadblocks.

### **5.3 Recommendations**

1. The researcher recommends that small-scale dairy producers should pay close attention to how these initiatives are conceived and implemented, without overlooking the necessity of using a logical framework approach. A logical framework is a crucial instrument for starting a project approval, designing a project, and evaluating a project.
2. For stakeholders to own the project and embody the project outcome, it is advised that they be involved in the initiatives from the planning stage through execution. They must be given complete and accurate documents on the project in order to assist in the



sourcing of funds and the application of laws and rules that may impact the duties. It went on to say that the stakeholders should be included in the challenge selection process.

3. According to the study, input indicators should be devised to measure the quantity of vital resources available to help counteract potential unanticipated obstacles. To the degree practicable, input indications should be based on current project management systems. Budgetary reports, procurement orders, and transportation information are supplied on the available resources for the project.
4. Monitoring and assessment of initiatives is advised since it enhances the challenge's overall performance to the greatest extent possible. To enable the exchange of learned know-how and instructions, monitoring projects should be more participatory. It is also recommended that appropriate money be put up for M&E projects, which must be included in the task budgeting. The project's development file should be updated on a regular basis to aid in tracking the mission's progress at each step of implementation.

#### **5.4 Limitations of the Study**

There were a few flaws in this study. First, the whole research timeline was disrupted by the corona virus epidemic, which hit the entire country in March 2020, disrupting learning activities and, as a result, the data collection procedure for this study. Furthermore, respondents withheld information during the data gathering procedure, limiting the study; yet, the researcher convinced them that the study was undertaken for academic interests.

#### **5.5 Suggestion for Further Studies**

This study focused on monitoring and evaluation tools on the performance of dairy goat projects by farmers in Kitui County. Further study should be conducted on determinants of performance of small-scale dairy farming projects of other counties so that contrast can be developed from the outcomes. This investigation looked at logical framework, Gantt charts,

project monitoring indicators and routine monitoring. Further research should be carried out concentrating on other projects monitoring and evaluation tools.

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## APPENDICES

### APPENDIX I: UNIVERSITY OF NAIROBI RESEARCH PERMIT CERTIFICATION



**UNIVERSITY OF NAIROBI  
OPEN, DISTANCE & e-LEARNING CAMPUS  
SCHOOL OF OPEN AND DISTANCE LEARNING  
DEPARTMENT OF OPEN LEARNING  
NAIROBI LEARNING CENTRE**

Your Ref:  
Our Ref:  
Telephone: 318262 Ext. 120

Main Campus  
Gandhi Wing, Ground Floor  
P.O. Box 30197  
NAIROBI

11<sup>th</sup> April, 2021

UON/ODEL/NLC/29/468

#### TO WHOM IT MAY CONCERN

**RE: MILCAH MUKULU KIMEU - REG.NO. L50/28707/2019**

This is to confirm that the above named is a student at the University of Nairobi, Open Distance and e-Learning Campus, School of Open Learning, Department of Open Learning pursuing a Masters course in Project Planning and Management.



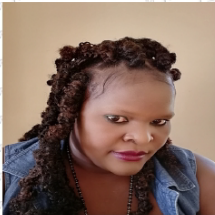


She is proceeding for research entitled "**Utilization of Monitoring and Evaluation Tools in Performance of Dairy Goats Farming Projects in Kitui County, Kenya**"

Any assistance given to her will be appreciated.



**CAREN AWILLY**  
CENTRE ORGANIZER  
NAIROBI LEARNING CENTRE

## APPENDIX II: NACOSTI RESEARCH LICENSE

 <p>REPUBLIC OF KENYA</p>	 <p><b>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY &amp; INNOVATION</b></p>
Ref No: <b>782328</b>	Date of Issue: <b>11/June/2021</b>
<b>RESEARCH LICENSE</b>	
	
<p><b>This is to Certify that Ms.. KIMEU MILCAH MUKULU of University of Nairobi, has been licensed to conduct research in Kitui on the topic: UTILIZATION OF MONITORING AND EVALUATION TOOLS ON PERFORMANCE OF SMALL-SCALE DAIRY GOATS FARMING PROJECTS IN KITUI COUNTY for the period ending : 11/June/2022.</b></p>	
License No: <b>NACOSTI/P/21/11133</b>	
<b>782328</b>	
Applicant Identification Number	Director General <b>NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY &amp; INNOVATION</b>
	Verification QR Code
	
<p><b>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</b></p>	

## APPENDIX III: COUNTY AUTHORIZATION



COUNTY GOVERNMENT OF KITUI  
DEPARTMENT OF LIVESTOCK AND FISHERIES

P.O BOX 33-90200  
Email:  
kituicounty@kenya.go.ke

Date: 13<sup>th</sup> June, 2021

OUR Ref KC/ADM/VOL 6/51

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION FOR MS. MILCAH MUKULU KIMEU REG  
LS0/28707/2019

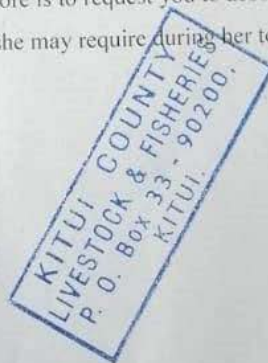
Reference is made to director general. National Commission Science technology and Innovation Letter Ref No. 782328 Dated 11<sup>th</sup> June 2021 on above subject.

This is to inform you that the named person of University of Nairobi has been dully authorized to carry out research on –UTILIZATION OF MONITERING AND EVALUATION TOOLS ON PERFORMANCE OF SMALL-SCALE DAIRY GOATS FARMING PROJECTS IN KITUI COUNTY within Kitui county for a period ending 11<sup>th</sup> June 2022.

The purpose of this letter therefore is to request you to accord her your cooperation guidance and any other necessary assistance she may require during her tour in research.

Josphat Maluki

D.D livestock and fisheries



**APPENDIX IV: LETTER OF TRANSMITTAL**

KIMEU MILCAH MUKULU

P.O BOX 19284

**EMBAKASI**

Email: [kmilcah3@gmail.com](mailto:kmilcah3@gmail.com)

Tel no. 0728796987

November 26, 2020

**TO WHOM IT MAY CONCERN**

I am a master's student at the University of Nairobi carrying out research project as part of the course requirement for the award of a master degree of arts in project planning management. The study seeks to establish the utilization of monitoring and evaluation tools on performance of dairy goat projects in Kitui County.

The purpose of this letter is to request you to participate as a respondent in this study by completing the attached questionnaire and observation schedule where applicable as accurate as possible. The findings will be strictly be used for academic use with no name of the respondent mentioned in this exercise, your honest participation will be highly appreciated.

Thankyou

Sincerely

**MILCAH KIMEU**

**LSO/28707/2019**

**UNIVERSITY OF NAIROBI, SCHOOL OF OPEN AND DISTANCE LEARNING**

## **APPENDIX V: QUESTIONNAIRE**

Please give answers in the spaces provided and tick (√) questions where applicable. All the responses will be treated with utmost confidentiality. Please do not include your name on the questionnaire. Kindly spare your time to give honest information and be as accurate as possible.

### **SECTION A: DEMOGRAPHIC AND RESPONDENTS PROFILE**

1. What is your gender ?

Male [ ]

Female [ ]

2. What is your age bracket?

(a) Below 30years [ ]

(b) 31 -40 years [ ]

(c) 41-50 years [ ]

(d) Above 50 years [ ]

3. What is your family size?

(a) Less than 3 [ ]

(b) Between 3-5 [ ]

(c) More than 5 [ ]

4. What is your highest level of education?

(a) Undergraduate [ ]

(b) Tertiary college [ ]

(c) Secondary [ ]

(d) Primary [ ]

(e) Unschoolled [ ]

5. What is your religion?

(a) Christian [ ]

(b) Muslim [ ]

- (c) Traditional
6. For how long have you been practicing this small-scale goat farming?
- (a) Less than one year
- (b) Less than two years
- (c) More than 3 years
7. How many dairy goats did you start rearing the first time?
- (a) Less than 50
- (b) Less than 100
- (c) Less than 200
8. How many dairy goats are you rearing currently?
- (a) Less than 200
- (b) 201 – 400
- (c) Above 400
9. What is the status of your goat farming?
- (a) Full time farming
- (b) Part time farming

**SECTION B: SPECIFIC OBJECTIVES**

**OBJECTIVE ONE: LOGICAL FRAMEWORK**

To what extent do you agree with the following statements regarding the influence of Logical Framework on performance of small-scale dairy farming projects?

**KEY:** SA Strongly Agree A: Agree N: Neutral D: Disagree SD: Strongly Disagree

Statement	SD	D	N	A	SA
Time is very essential factor which influence the success of small-scale dairy goat farming					
A lot of undertakings are involved in this farming					
The project has a specific purpose for its establishment					
The beneficiaries have risks and assumptions about this farming					



The project background is paramount for the success of small-scale dairy goat farming					
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### **OBJECTIVE TWO: GANTT CHART**

To what extent do you agree with the following statements regarding the influence of Gantt charts on performance of small-scale dairy farming projects?

**KEY: SA** Strongly Agree **A:** Agree **N:** Neutral **D:** Disagree **SD:** Strongly Disagree

Statement	S D	D	N	A	S A
Project tasks should be schedule to ensure success					
Resources required for the success of the project should be organized					
Gaining an understanding of the project and tracking the project against a given time is paramount					

### **OBJECTIVE THREE: ROUTINE MONITORING**

To what extent do you agree with the following statements regarding the influence of Routine Monitoring on performance of small-scale dairy farming projects?

**KEY: SA** Strongly Agree **A:** Agree **N:** Neutral **D:** Disagree **SD:** Strongly Disagree

Statement	SD	D	N	A	S A
Several processes involved should be monitored to ensure success					
Supervision of technical know-how guarantee productivity.					
Financial involvement at every stage should be monitored to yield profitability.					
The impact of the project should be regularly assessed to yield success					

### **OBJECTIVE FOUR: PROJECT PERFORMANCE INDICATORS**

To what extent do you agree with the following statements regarding the influence of Routine Monitoring on performance of small-scale dairy farming projects?

**KEY: SA** Strongly Agree **A:** Agree **N:** Neutral **D:** Disagree **SD:** Strongly Disagree

Statement	SD	D	N	A	SA
Impact indicators should be considered to determine the project success					
Essential input resources should be considered to counter challenges beforehand.					
The performance of the project should be duly tracked using process indicators					
Outcome indicators describe the delivery of products and create standards to guarantee profitability					

**DEPENDENT VARIABLE: PERFORMANCE OF SMALL- SCALE DAIRY GOAT**

**FARMING**

To what extent do you agree with the following statements as the best description of performance of small-scale dairy farming projects?

**KEY: SA** Strongly Agree **A:** Agree **N:** Neutral **D:** Disagree **SD:** Strongly Disagree

Statement	S D	D	N	A	S A
Small scale dairy farming performs highly					
Much profit accrues to the small-scale dairy farmers					
Small scale dairy farmers are satisfied with their farming					
There is an increased number of goat kids and bucks has been realized					

**APPENDIX VI: WORK PLAN**

ACTIVITY	TIME							
	Sept – Oct 2020	Oct - Nov 2020	Jan- Apr 2021	May 2021	July 2021	Aug 2021	Oct 2021	Nov 2021
Proposal Development								
Proposal Submission								
Proposal Defense								
Proposal Correction								
Piloting of Research Instruments								
Data Collection and Analysis								
Project Writing and Defense								
Project Correction, Publishing and Submission								

## APPENDIX VII: BUDGET

	<b>ACTIVITY</b>	<b>COST</b>
1.	Proposal development Printing of 45 pages @kshs 10 each plus reproduction 4 other copies	2,250
2.	Binding 5 copies @kshs 100	500
3.	Traveling expenses	15,000
4.	Data collection Data collection (research assistant)	10,000
5.	Books and reading materials (including cost of downloading materials)	10,000
6.	Data analysis and computer runtime	15,000
7.	Printing 480 pages of questionnaires and observation schedule	4,800
8.	Others miscellaneous expenses	15,000
<b>9.</b>	<b>Total</b>	<b>72550</b>