



“Unpacking Routine Program Monitoring-Sustainability of Agricultural Projects Funded by Non-governmental Organizations Nexus. An empirical Study in Bungoma County, Kenya”

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ABSTRACT

Guided by systems theory, this study investigated how routine program monitoring influences sustainability of agricultural projects. Analysis included the following tests: means, frequencies and standard deviations for descriptive analysis while inferential statistics was conducted by the use of correlations, and linear regression. The study had the following findings: Sustainability of agricultural projects had a general mean (GM) of 24.7080 and a general (SD) of 4.30998 showing that agricultural projects were not sustained. Small standard deviation showed a consensus among participants on this issue. For routine program monitoring, the general mean score for all items was 31.2336 with general standard deviation of 4.82984. The implication of this mean score and standard deviation in respect to the study is that there was general agreement in opinion among participants that organizations utilized monitoring and evaluation system in terms of routine program monitoring. The results from interview guides supported the quantitative results, by agreeing that organization indeed utilized monitoring as required. Project managers were convinced that organizational monitoring system was in good condition, the only challenge that was expressed by project managers concerning monitoring system is poor utilization of collected data to make corrective measures. It was said that data collected from monitoring was rarely used to make project improvements. Routine program monitoring was found to have a very small positive correlation with sustainability of agricultural projects which was not statistically significance. H_0 : was not rejected with $r = 0.059$, $[F = (1,135) = 0.476, p = 0.491, R^2 = 0.4\%]$. This shows that the regression model was not fit.

Key words: Sustainability of agricultural projects; Monitoring and evaluation systems, Routine program monitoring, Non-governmental organizations

INTRODUCTION

Routine program Monitoring

Routine monitoring data are data generated as part of the implementation of a program, activity or service e.g., attendance registers completed at schools every day. Routine monitoring data can be distinguished by the nature of the data (census data about the demand for services, routine program monitoring data about the supply of services, and routine financial monitoring data), or by the location where the data are generated (e.g., at health facilities or in the community), or by the types of organizations that generate the data (public sector, private sector and civil society). Kusek J. Z. and R. C. Rist. 2000.

Within social development, monitoring can be defined as the " ... systematic and continuous collecting and analysing of information about the progress of a piece of work over time" (Gosling and Edwards 2003, p12). Monitoring is done to ensure that all the persons who need to know about a development intervention are appropriately informed about it. It is also done so that management decisions can be taken in a timely manner. Routine monitoring data are data generated as part of the implementation of a program, activity or service e.g., attendance registers completed at schools every day. Routine monitoring data can be distinguished by the nature of the data (census data about the demand for services, routine program monitoring data about the supply of services, and routine financial monitoring data), or by the location where the data are generated (e.g., at health facilities or in the community), or by the types of organizations that generate the data (public sector, private sector and civil society). Kusek J. Z. and R. C. Rist. 2000.

The importance of Monitoring in global efforts toward achieving environmental, economic and social development cannot be understated (Muller, 2007). For many years, monitoring has been seen as the '*poor relation*' of evaluation Pratt and Boyden 1985, Simister 2000. Evaluation is often seen – especially by donors – as more valid because it is largely conducted by outside experts, using established and transparent methodologies. As a result, a great deal of energy, resources and advice has gone into the field of evaluation, with support for monitoring more limited.

However, in many circumstances monitoring may be more important than evaluation, especially for CSOs that want to learn from their experiences and use this to improve performance. There are two main reasons for this. Firstly, monitoring is almost always conducted by in-house project staff, while evaluations are frequently conducted by outside consultants. This means that the monitoring process provides greater opportunities for CSO staff to utilize their own knowledge and experience, while the learning resulting from evaluations is often focused more on the needs and perceptions of outside agencies.

Secondly, because monitoring is a continuous process, rather than a periodic one, it enables adjustments to be made in a timely and methodical way. This means that lessons can be applied immediately rather than waiting months or even years for a formal evaluation to be conducted. But if monitoring is the more important of the two in many circumstances, it is also more difficult to do well (Gosling and Edwards 2003). This is because it relies on a system, rather than being a one-off task carried out by a dedicated team or individual. To serve a useful purpose, this system needs to generate information that is relevant, accurate and timely for a range of different stakeholders. This is often a difficult exercise, especially as many CSO staff engaged in monitoring are not M&E specialists.

Statement of the Problem

Agricultural projects are meant to empower communities through food provision which will eventually reduce poverty levels. If agricultural projects fail to be sustained after project completion, then community livelihoods are at stake. The efforts of NGOs to empower rural communities through poverty alleviation projects which include agricultural projects are to a greater extent proving to be unfruitful. The projects are often left uncompleted and thus cannot continue once they are left in the hands of the community, and thus people's livelihoods are showing little or no improvement despite the efforts put in place, Tanga and Mundau (2014). There seems to be a missing link between the concept of "community empowerment" and the formulation and implementation of these projects, since the projects would sometimes show signs of lacking a sustainable nature, which thereby incapacitate the communities in their fight against poverty. This has led to poverty, starvation, and the continuation of high unemployment levels, (Tanga and Mundau, 2014).

This study reflects the first and the second sustainable development goals (SDG) which is end of extreme poverty, including absolute income poverty (\$1.25 or less per day) and end hunger, achieve food security and improved nutrition, and promoting sustainable agriculture. Ending extreme poverty, including absolute income poverty (\$1.25 or less per day) is measured by among others the percentage of population living below a country's poverty line while ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture is measured by among others, crop yield gap (actual yield as % of attainable yield). Across all societies, people's lives orbit around planning for and practicing diverse livelihoods. Demand for food in the world is growing. Population growth is expected to increase in the coming decades, the global food production needs to increase by at least 50% by 2050 to feed the growing population Erokhin, V. (2017). According to the Food and Agriculture Organization of the United Nations FAO (2017), by 2030, the global production of grain will have reached 2.1 billion tons, while the world demand for grain have increased up to 2.7 billion tons this is a clear warning that global policy makers in food security should heed and embark on supporting projects that directly relate to sustainability of agricultural projects.

According to the Kenya economic survey report 2014, Bungoma County is one of the counties in top five contributors to national poverty index in the country with 3.79 per cent which means that Bungoma County has a high population of poor people contributing immensely to the national poverty index. According to the same report, Bungoma is one of the counties that are below threshold in terms of poverty line at 47.3%, this is in comparison to a national poverty line figure of 45.2% of the population living below the poverty line. The report indicated that poverty incidences per county ranged from a low of 21.8% to 87.5%. This implies that two in every 10 people in low incident areas live below poverty line compared to nine in every 10 people in high incident areas. According to the 2009 national census, Bungoma has a population of 1,375,063 million people and the county has a number of NGOs with visions and missions of attaining economic freedom to the population, however, according to the Kenya economic survey of 2018, little impact can be felt on the ground despites millions of dollars spent.

Majority of agricultural projects have generally been unsuccessful to bring sustainable benefits to the target groups, though numerous projects highlight fundamentals of sustainability in their proposal stage, the actual implementation still seems to lack emphasis on sustainability (Oino,

Towett, Kirui, & Luvega, 2015). NGOs sought to ensure the sustainability of the food supply and increase the well-being of people, especially those with a low income. However, under a fluctuating influence of various internal and external factors, such support often backfires on the food security of a country. Termination or end of projects seems to be an automatic termination of projects benefits to the community, there is no trickle down or sustainability of the project benefits after a project is completed, Erokhin, (2017).

The importance of utilization of monitoring and evaluation system in the implementation of NGO projects has been recognized (Wasiams, 2007). According to Kusek and Rist, 2004 , monitoring is important because, after selecting targets and completing the performance-based framework, monitoring enables the use of information to observe the results, it makes it possible to put together a system to get the necessary data to better inform the decision making process. The resulting data provides evidence on performance and flag any changes that may be needed for a given project, program, or policy. Monitoring enables the review of the need to manage inputs as well as outputs and outcomes. Managers use a variety of organizational tools to manage inputs, including budgets, staffing plans, and activity plans. It is for this reason that the researcher investigated how routine program monitoring as a component of M&E system influences the sustainability of agricultural projects.

Objective of the study

The objective of the study was to investigate the influence of routine program monitoring on the sustainability of agricultural projects.

Research hypothesis

The study tested the following hypothesis;

H0: There is no significant relationship between routine program monitoring and sustainability of agricultural projects funded by Non-governmental organizations in Bungoma County, Kenya.

Theoretical Framework

Systems Theory

Systems theory aims to explicate dynamic relationships and interdependence between components of the system and the organization–environment relationships. A system is established based on the structure and patterns of the relationships emerging from interactions among components. This study adopted the systems theory advanced by Ludwig von Bertalanffy in 1968. Systems theory is a way of elaborating increasingly complex systems across a continuum that encompasses the person in environment (Anderson, Carter, & Lowe, 1999).

Systems theory also enables us to understand the components and dynamics of client systems in order to interpret problems and develop balanced intervention strategies, with the goal of enhancing the “goodness of fit” between individuals and their environments. Systems theory is linked to a science of wholeness. Systems theory does not specify particular theoretical frameworks for understanding problems, and it does not direct the social worker to specific intervention strategies. Rather, it serves as an organizing conceptual framework or metatheory for understanding (Meyer, 1983). As a profession, social work has struggled to identify an organizing framework for practice that captures the nature of what we do. Many have identified systems theory

as that organizing framework (Goldstein, 1990; Hearn, 1958; Meyer, 1976, 1983; Siporin, 1980). This theory is relevant because my study investigated the influence of routine program monitoring as a component of monitoring and evaluation system on the sustainability of the agricultural projects. In this essence, monitoring and evaluation system is expected to provide a balanced system which should ensure that no subsystem area is emphasized at the expense of the system as a whole. It should also ensure that there is an inter-operability of the system in which all related systems and subsystems are common standards for data interchange and work together to accomplish shared processes.

LITERATURE REVIEW

Theoretical and empirical literature was reviewed based on the concept of routine program monitoring.

Routine program monitoring and sustainability of agricultural projects

The fuel of an M&E system is its data. The data that the M&E system requires to run are determined by the indicators and the research questions in the M&E plan. The different indicators (input indicators, output indicators, outcome indicators and impact indicators) in the M&E system require three types of data sources: routine, periodic, and one-off. Each of these three types of data sources are components of the middle ring (data collection, capture and verification) of the 12 Components of a functional M&E system: Routine data sources for routine monitoring, secondly, periodic data sources for periodic surveys and lastly, one-off data sources for evaluation and research, Görgens, M., & Kusek, J. Z. (2010)

Routine Program monitoring is defined as the periodic supervision of activities in progress to ensure they are on-course and on-schedule in meeting the objectives and performance targets (Sinclair, 2005). Routine program monitoring generally means “to be aware of the state of a system, to observe a situation for any changes which may occur over time, using a monitor or measuring device of some sort (Zairi, 2005).” Implementation monitoring tracks the means and strategies (that is, those inputs, activities, and outputs found in annual or multiyear work plans) used to achieve a given outcome. These means and strategies are supported by the use of management tools, including budgetary resources, staffing, and activity planning. It should also be noted that there is an interaction between means and strategies (inputs, activities, and outputs) and outcome targets. Targets are set according to what the means and strategies potentially can yield Kusek and Rist, (2004)

Monitoring is an ongoing function that employs the systematic collection of data related to specified indicators in Public projects. Monitoring and evaluation is a tool in project management. Project management is possibly the second oldest profession (Ballard, 2013). Monitoring and evaluation (M&E) is described as a process that assists project managers in improving performance and achieving results (Agutu, 2014). The goal of M&E is to improve current and future management of outputs, outcomes and impact (United Nations Development Programme, 2002). Williams (2007) asserts that monitoring provides management and the main stakeholders of a development intervention with indications of the extent of progress and achievement of expected results and progress with respect to the use of allocated funds. Monitoring provides essential inputs for evaluation and therefore constitutes part of the overall evaluation procedure. Evaluation is an organised and objective assessment of an ongoing or concluded policy, program/project, its design,

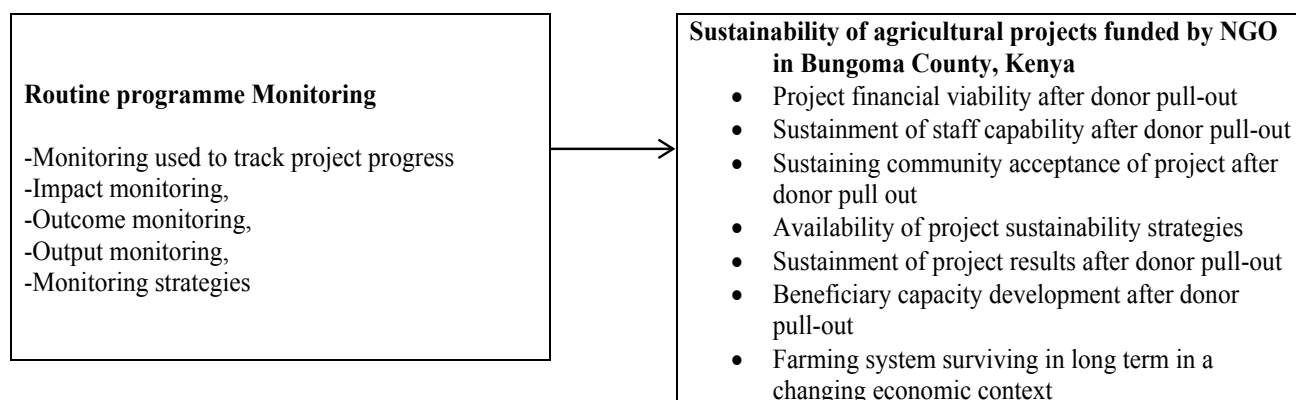
execution and results. The aim is to provide timely assessments of the relevance, efficiency, effectiveness, impact and sustainability of interventions and overall progress against original objectives. According to Ballard (2013), monitoring and evaluation is a process that helps program implementers make informed decisions regarding program operations, service delivery and program effectiveness, using objective evidence.

Wanjala, Amuhaya and Odhiambo, (2017) investigated the influence of monitoring techniques on project performance of Kenyan State Corporations. Simple random sampling was used to select 65 state corporations which form the sample size. Data were collected from the sample size using questionnaires with both open and closed questions. The data were analyzed using descriptive and inferential statistics as well as qualitative methods. The relationships between variables were determined using person correlation and t-test. Assessments of normality were done by Shapiro-Wilk test. Findings showed that Monitoring techniques ($\beta_3 = 0.674, p$) has significant effect project performance. The article also contrast with my study in that its depended variable was performance of Kenyan State Corporations while my project depended variable was sustainability of agricultural projects. Moreover, my study variable is concerned with the influence of monitoring while this article is concerned with the influence of monitoring techniques.

The investigation by Koffi Tessio (2002), on Efficacy and Efficiency of Monitoring practices for Projects Financed by the Bank Group that was done in Burkina Faso, Mauritania, Kenya, Rwanda and Mozambique, through work area audit and meetings, for projects endorsed in the vicinity of 1987 and 2000. Monitoring practices are not meeting their compulsory necessities as basic leadership instrument; Instead, their exercises are seen as controlling by a bureaucratic administration. The poor securing of the suitable monitoring practices by state partnerships is credited to accentuation on the physical framework (for example PC gear, working capital) as opposed to methodological and calculated preparing.

Conceptual Framework

This study is guided by the following conceptual framework



Sustainability Of Agricultural Projects Funded By Non-Governmental Organizations

In relation to implementation of projects, sustainability is the probability that a project shall continue long after the outside support is withdrawn. Consequently, while thinking of project sustainability, three things must be born in mind; the community, project results and external assistance. A project is sustainable if the community/beneficiaries are capable on their own without the assistance of outside development partners, to continue producing results for their benefit for as long as their problem still exists. (Oino, Towett, Kirui, & Luvega, 2015)

Among the multitude of definitions of sustainable development captured in the background of the study in this proposal, one almost constant inclusion is attention to interconnection of the environment, the economy, and society. These are generally referred to as the three pillars of sustainable development. Sustainable development, in some of its earlier iterations, and is still depicted as three-legged stool consisting of the environment, the economy, and society as the legs. This model treats each of the three pillars as separate and equal entities. The underlying conceptualization of the stool is that if any leg is less important (shorter) or missing the stool becomes unstable. However, if all three legs are the same length (each pillar being given equal weight), the result will be a balanced stool that supports sustainable development (Scottish Environment Protection Agency 2002). Most of our western decision-makers still regard sustaining development at the expense of the environment as “sustainable development.” This often leads to an economy that is vibrant but without equitable social well-being (Brink & Zeeman 1997; Curry-Stevens 2001) or a healthy environment—thus the necessity for the creation of the three-legged-stool model

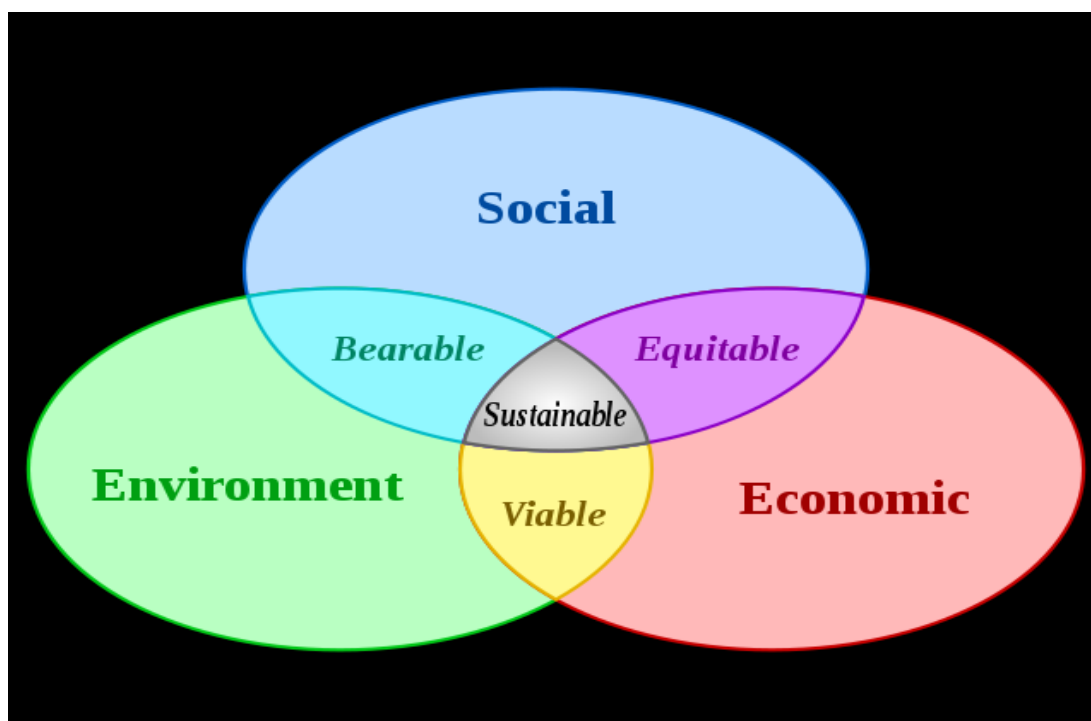


Figure 2.1: Sustainable Development Model

Adopted from Scottish Environment Protection Agency, (2002)

Ramsbottom, (2013) conducted a study entitled Factors affecting social sustainability in highway projects in Missouri. The study stated that sustainability focuses on the interaction between a given project and the social, environmental, and the economic dimensions of the system enclosing it. The study noticed that majority of the studies conducted focused mostly on the environmental aspects of sustainability rather than the economic ones, while very few studies discussed the social dimension. Social sustainability promotes the concepts of respect, awareness, diversity, vitality, and responsibility toward the workforce and the society by keeping them healthy and safe from harm during the different phases of a project.

This article discussed highway projects which are one of the most critical infrastructure projects in the construction industry. This is due to their high budgets, frequent occurrences, and the inevitable disturbance they cause to the existing communities and environment. As such, this article conducted a comprehensive study to analyze the performance of highway projects with respect to the social dimension of sustainability. The comprehensive methodology of conducting this research started with extensive review of the available literature in specifically three areas. The first area focused on green building and sustainability in general, which helped in defining the broad lines of this research. The other two areas of focus were social sustainability and highway construction to identify the social sustainability requirements at each specific stage in the construction of a highway. Based on previous sustainability models, a clear definition of social sustainability was given along with a complete list of factors that should be considered to guarantee the practice and implementation of social sustainability in highway projects. The research identified ten main factors that if considered social sustainability can be easily implemented in highway construction.

A questionnaire was then designed to solicit the opinions of experts in the construction of highway about two main aspects: 1) the importance of the consideration of each of the identified factors to achieve social sustainability in highway projects; and 2) the likelihood that such factors are currently considered by practitioners at different stages of highway construction. The questionnaire included 10 questions; only the first question solicited the experts' opinion about the importance and the likelihood of implementing the identified factors using a Likert scale and its corresponding weights. The rest of the questions addressed other issues related to social sustainability in highway construction. The collected data were analyzed and statistical tests were conducted to verify the consensus in responses from two different highway project stakeholders, i.e. owner and contractor.

Saysel, (2001) conducted a study entitled Environmental sustainability in an agricultural development project: a system dynamics approach. The study asserted that regional agricultural projects based on water resource development have many potential impacts on social and natural environments. In this article, potential long-term environmental problems of the Southeastern Anatolian Project (GAP) related to water resources, land use, land degradation, agricultural pollution and demography were analyzed from a systems perspective.

The analysis focuses on the totality of environmental, social and economic issues. For this purpose, a system dynamics simulation model was developed as an experimental platform for policy analysis. The study revealed that, as the irrigated lands are developed, GAP faces significant water scarcity because of the increased intensity of cotton, the crop with the highest demands for water. Simulation results also indicate that two key environmental factors, pesticide and fertilizer

consumption may reach undesirable levels. Alternative irrigation water release strategies, development rates of irrigated fields and farm rotation practices appear as important policy tools in achieving long-term environmental sustainability.

Mwale, (2012) conducted a study entitled marketability and sustainability of food security programmes: products and productivity of agricultural projects. The paper addressed the marketability and sustainability of food security programmes in Limpopo Province. Food security featured prominently because poverty and inequality remains a huge challenge in South Africa's rural sector. Thus the Government initiated the establishment of agricultural community projects as part of interventions for creating jobs and improving income levels. However, lack of monitoring mechanisms in established projects create a challenge of non-sustainability of these projects.

The study used formative evaluation approach to determine the effectiveness of the established food security programme. A mixed model approach was used to collect data from key informants and project members. Descriptive statistics were computed using SPSS. Most projects were on vegetable, poultry and piggery production. The study has found that 64.1% of the respondents reported that access to inputs was not a challenge. Project products are sold to community members who accounted to 79%, and few (1%) to individuals owning business, clinics and outside the community. Project members advertised their produce mainly verbally (47.2%). Marketing strategies for project products were lacking and this creates a negative impact on income generated and sustainability of projects. The paper concluded by suggesting that project members should be advised on appropriate marketing strategies.

The concept of project sustainability lies at the center of the major debates on development management theories ([Thomas, 1996](#)). Broadly speaking, project sustainability relates with the success of an intervention, which is the ultimate goal of the project in producing positive changes. From a sociological and anthropological standpoint, projects are primarily social interventions within a given social system, arousing social processes which change at least to some extent the social structures and institutions of this system and the social behavior of its members (Meyer, 2002). Therefore, development practitioners should ensure that the social systems adapt to the changing social trends in the community-based projects to enhance project sustainability. Ingle (2005), asserts that for a project to achieve sustainability, it needs to be implemented through a strategic approach.

The strategic approach incorporates four main elements, future orientation: assuming things will change, and planning to maximize benefits which can be derived during and from that change; external emphasis: recognizing the diversity of the project environment and the many dimensions which impact on project outcomes, including technology, politics, society, and economics; environmental fit: planning for a continual fit between the project and its environment, including mission, objectives, strategies, structures, and resources; and process orientation: planning and management priorities evolve in an iterative cycle of conscious and deliberate learning from experience as the reality changes. Nuguti (2009) sustainability is a measure to determine continuation of a project or positive results after external funding have been concluded. Static sustainability refers to continuously flow of same benefits that were set in motion by the completed project to the same target group. Dynamic sustainability refers to use of, or adaptation of project results of a different context or a changing environment by original target group or other group.

Some of the elements of sustainability that can be measured through evaluation include, financial viability which is a capacity of a delivered project to generate some income that cover enduring operational cost, secondly, sustaining staff capacity which is the extent in which skilled staff members, or their replacements continue to stay with the project and that their skills are kept up kept up to date with training and properly utilized by the project and lastly, sustaining community acceptance. If considering the value of the project to the community a continued acceptance of the project by the community meant sustainability.

Therefore, it is important to instill a sense of "ownership" of the project beneficiaries on the project. This is achieved through involvement in every stage of the of the project progress. There is pertinent literature to suggest that sustainable livelihoods perspective helps to enlist objectives, scope and priorities for development, based on the core principles of people-centred, participatory and sustainable activities. While Krantz (2001) applauded it as a more reasoned and holistic approach to poverty eradication and pro-poor development, Ludi and Slater (2007) called it a distinct perspective on understanding the lived reality of people. They concurred that it can be used to analyze how interventions tackle the non-material dimensions of poverty and contribute to strengthening a household's asset portfolio, thus enhancing their livelihood options and well-being. Additionally, many of the early reviews suggested that this approach was particularly useful for: the systematic and holistic analysis of poverty; providing an informed view of development opportunities, challenges and impacts; and placing people at the centre of development work (Ashley and Carney, 1999).

The sustainable livelihoods approaches have also led to: improving understanding of poor people's lives; the constraints facing them, and inter-group differences; increasing inter sectoral, collaborative and interdisciplinary community development research and work; and creating increased links between micro-, meso- and macro-level considerations in poverty and development discourse (Carney, 2002; Hussein, 2002). Ellis and Biggs (2001) remarked that all these characteristics make it consistent with the bottom-up approach to development.

METHODOLOGY

Research Paradigm

Pragmatism paradigm worldview was applied in this study. Pragmatism advocates the use of mixed methods in research. Pragmatism paradigm arises out of actions, situations, and consequences rather than antecedent conditions (presumptive conditions i.e, hypothesis) as in post positivism. It focuses on what works and solutions to problems Patton (1990) Instead of focusing on methods, researcher emphasizes the research problem and uses all approaches available to understand the problem (Creswell, 2003). Mixed methods approaches has become more firmly embedded in mainstream research, pragmatists link the choice of approach directly to the purpose of and the nature of the research questions posed (Creswell 2003). Under the paradigm, the study was a multi-purpose and a "what works" tactic was allow the researcher to address questions that did not fit comfortably within a wholly quantitative or qualitative approach to design and methodology. For these reasons pragmatist's paradigm was adopted. The researcher used pragmatism because of the nature of the problem under investigation. Understanding the influence of M&E system on the sustainability of agricultural projects is rather a novel area that needs a mixed approach. This enabled the researcher best understand the research problem otherwise, the use of either quantitative or qualitative by itself would inadequate to best explore the problem under study, the

strengths of both quantitative and qualitative research and its data would provide the best understanding.

The researcher intentions was to generalize the findings to a population as well as to develop a detailed view of the meaning of the phenomena under the study (sustainability of the agricultural projects). The researcher also used both approaches because of the personal experience in the both quantitative and qualitative. This study used a dichotomous and categorical questionnaire that consisted of open ended questions that would capture qualitative data, structural, yes/no and 5-level questions on agreement that would yield quantitative data.

Research Design

The study adopted a combination of descriptive survey, cross-sectional survey and correlational design. The quantitative approach, consisting of closed-ended questions that would elicit information to be used for descriptive and inferential purposes. The qualitative approach with open-ended questions obtained in-depth information to be used to validate descriptive and inferential results (Mwanje, 2001). Across-sectional survey design is cheaper than longitudinal designs; thus, making it most appropriate for academic investigators who do not have scholarships or are limited by budgetary constraints (Rindfleisch, Malter, Ganesan and Moorma, 2008). Besides, unlike longitudinal survey designs, a cross-sectional design is not vulnerable to confounding factors such as social, political, and cultural changes because data is collected at one point in time.

Cross-sectional surveys are appropriate for studies that examine concrete and externally oriented constructs, sample highly educated respondents, employ a diverse array of measurement formats and scales, and are strongly rooted in theory (Rindfleisch et al., 2008). The correlational research design is considered appropriate for the study because the purpose of the study is to determine causality between two sets of variables (independent and dependent) as well as the influence of a third set (moderating variables) on the causal relationship. As noted by Fraenkel and Wallen (1996), correlational research design enables investigators to determine relationships between two sets of variables. Furthermore, the design is appropriate because the study tested null hypotheses to determine whether they hold true to reality or not.

Target Population

The target NGOs was selected in the criteria of having a functioning monitoring and evaluation unit, must have implemented an agricultural projects and lastly the NGOs must have been in operation for not less than three (3) years. The study participants included project officers, project volunteers, M&E officers, data entry officers and project managers, implementing agricultural projects. The study had a target population of 216 participants for categorical data which was made up of 153 Project officers, 20 M&E officers, 27 volunteers implementing agriculture projects, and 20 data entry officers from all the NGOs, also, the study had 27 project managers for qualitative data. (NGOs Finance and Administrations records for the selected NGOs, 2018). This is shown in table 3.1 and 3.2

Table 1: Category of target population by strata

	Target population by strata	No
1.	Project officers	153
2.	M&E officers	20
3.	Volunteers	27
4.	Data officers	16
Total		216

Sample Size and Sampling Procedure

The study used probability sampling technique. This section discusses the sample size and the sampling procedure adopted in the study.

Sample Size

The study had a sample was 140 respondents for subordinate staff implementing agricultural projects that was selected from a target population of 216 using Yamane (1967) formula and 8 project managers that was purposively selected from a target of 27

$$n = \frac{N}{1 + N(e)^2}$$

$$216/1+216(0.05^2)$$

$$217/1.54=140$$

n= is the required sample size

N= is the targeted sample size

e²= error limit (0.0025)

Substituting N in the above formula gives a sample size of 140 respondents.

Sampling Procedure

To sample the respondents, stratified random sampling was used to ensure that all parts of a population are represented in the sample in order to increase the efficiency of the study (Kothari, 2009; Kotrlik and Higgins, 2001). The study used job positions (Project officers, M&E officers, volunteers, and data entry officers) held by the respondents in these organizations as strata. To have proportional representation from each stratum, a sample was drawn independently in the same ratio so as to have similar percentage of each total. Random sampling was used to ensure that each element in each stratum has equal probability to be selected for the study. Pieces of papers was written numbers equal to the elements in each stratum then random numbers selected up until the required numbers was reached as shown in the proportional allocation for each category. This process was be repeated until sample from each category is selected. The study also used purposive sampling method in the case of strata that has a single participant. Researcher also used purposive sampling to select 8 project managers from a total of 27. Table 3.3 and 3.4 shows the allocation of random numbers per category and per NGO.

Table 2: Proportional allocation of participants per category

The strata	Target population from strata	Proportionally allocated sample size	Sampling procedure
Project officers	153	99	Simple random
M&E officers	20	13	Simple random
Volunteers	27	17	Simple random
Data officers	16	11	Simple random
Total	216	140	

RESULTS

Demographic Information Of Respondents

Demographic characteristics of respondents

The study was interested in the assessing background characteristics of the participants, the researcher sort to check on the distribution of participant's age, gender, and years of service in the organization.

Age of the respondents

Respondents were asked to indicate their age group in years. This was done to ascertain that respondents were normally distributed in respect to age since an individual's age was not a consideration in the selection of respondents in this study. Age groups were classified into five categories: 18-25, 26-35, 36-45, 46-55 and above 55 years. Responses on age are shown in table 4.2

Table 3: Distribution of respondents by age

Age	Frequency	Percent
18-25	9	3.8
26-35	34	14.4
36-45	65	27.5
46-55	18	7.6
Above 55 years	11	4.7
Total	137	58.1

The research findings on age of participants indicate that 9(6.6%) of the respondents were between the ages of 18 and 25 years; 34(24.8%) between 26 and 35 years; 65(47.4%) of the respondents between 36 and 45 years; 18(13.1%) of the respondents between 46 and 55 years while 11(8%) of the respondents between above 55 years. That 91.9% of the respondents were 55 years and below implies that majority of the respondents were at their productive age as employees and therefore in respect to sustainability of agricultural projects in non-governmental organizations, age of the respondents would be an insignificant factor. Therefore in determination of the influence of the monitoring and evaluation system on sustainability of agricultural projects funded by NGOs, other factors other than respondents' age were under consideration in this study

Gender of the respondents

Researcher sought establish whether or not respondents were males or females. This was done to establish that respondents were normally distributed between the two genders because in this

study, none of the gender was given preferential consideration in the selection of respondents. Responses on gender are shown in table 4.3

Table 4: Distribution of respondents by gender

		Frequency	Valid Percent
Valid	Female	65	47.0
	male	72	53.0
	Total	137	100.0

Results on participants gender indicated that 65(47%) of the respondents were females while 72(53%) were males. This indicates that non-governmental organizations had complied with the requirement of employment of balancing the gender or be at least 30% of either gender (GOK, 2012). Respondents in this study were skewed favorably in respect to gender spread which enhanced the quality of the analysis of results given that the study was guided by pragmatism research paradigm which Anthony (2004) indicates as the best suited paradigm for mixed methods research design in that it incorporates multiple realities in research like the gender factor.

Years of experience

The study was interested in establishing the distribution of respondents by years of service in the current organization, this was done to ascertain that respondents were knowledgeable about the organization they were responding about in respect to the influence of monitoring and evaluation system on sustainability of agricultural projects moderated by leadership competencies. Responses on years of experience are shown in table 4.4

Table 5: Distribution of respondents by year of service in the current organization

Experience in years	Frequency	Percent	Valid Percent
1 – 5	20	8.5	14.6
6 – 10	85	36.0	62.0
11 – 15	18	7.6	13.1
Over 15 years	14	5.9	10.2
Total	137	58.1	100.0

The results on number of years in the current organization indicated that 20(14.6%) of the respondents had worked in their current organization for between 1 to 5 years; 85(62%) had worked for between 6 to 10 years, then 18(13.1%) had worked for between 11 to 15 years and 14(10.2%) had worked for over fifteen years. The results showed that many respondents had worked in the this organizations for more than five years which was considered in this study sufficient to make objective responses on the monitoring and evaluation system and sustainability of agricultural projects.

SUSTAINABILITY OF AGRICULTURAL PROJECTS FUNDED BY NGOS

This was the outcome variable of the study as informed by the existing empirical literature and the related theories, the following indicators were considered to measure sustainability of agricultural projects: Project financial viability after donor pull-out, sustainment of staff capability after donor pull-out, sustaining community acceptance of project after donor pull out, availability

of project sustainability strategies, sustainment of project results after donor pull-out, beneficiary capacity development after donor pull-out, and farming system surviving in long term in a changing economic context. To measure sustainability of agricultural projects indicators provided, ten items (10) were developed in section B of the questionnaire. Data from interview schedules were collected and analyzed and results triangulated with the results from interview guides. The respondents were asked to rate the statements on the scale of 5 in which 1 denoted strongly disagree, 2 disagree 3 neutral 4 agree and 5 strongly agree. The following scoring was also used: (SD: $1 < SD < 1.8$), (D: $1.8 < D < 2.6$), (N: $2.6 < N < 3.4$), (A: $3.4 < A < 4.2$) and (SA: $4.2 < SA < 5.0$). The mentioned scales give an equidistance of 0.8. Results are presented in table 4.10

Table 6: Distribution of responses on the sustainability of agricultural projects funded by NGOs

	<i>Items</i>	<i>N</i>	<i>Mean</i>	<i>Standard deviation</i>
4a	<i>The organization has strategies to retain financial viability of projects after donor pull-out</i>	137	1.9270	1.15450
4b	<i>After donor pull-out, the organization have effective strategies to retain the staff skills obtained from the project</i>	137	3.3869	1.20201
4c	<i>The organization have effective strategies to maintain community acceptance of projects after donor pull out</i>	137	3.5036	1.02988
4d	<i>The organization has project Sustainability strategies</i>	137	2.8467	1.33885
4e	<i>There are strategies to retain project results after donor pull out</i>	137	3.6350	1.34425
4f	<i>After project termination, the organization has effective strategies to retain beneficiary skills required for their capacity empowerment.</i>	137	2.3869	1.23222
4g	<i>The organization has strategies to ensure farming systems of beneficiaries survives in long term despite changing economic context</i>	137	2.0584	0.88090
4h	<i>The organization has effective strategies to ensure project sustainability</i>	137	1.9708	1.25406
4i	<i>Beneficiaries' farming systems survives in long term despite changing economic context</i>	137	1.6277	1.09818
4j	<i>The organization has effective strategies to retain financial viability of projects after donor pull-out</i>	137	1.3650	1.04231

Table 4.10 shows ten items that measure sustainability of agricultural projects, the table presented means and standard deviations. Item 4a sought to establish the extent to which organizations possessed strategies to retain financial viability of projects after donor pull-out. This results had a mean of 1.9270 and standard deviation of 1.15450. The mean shows that there was general disagreement by the participants that organizations had strategies to retain financial viability of projects after donor pull-out, which means that organizations did not have strategies to retain financial viability of projects after donor pull-out. The same results had data values or scores with small variance from the mean as shown by a small standard deviation of 1.15450 which means that data is not highly spread out from the mean. This indicates that there was consensus in this result among the participants because of the consistency of responses from participants. This result was supported by the words of one of the project managers who said the following:

".....The organization solely depends on the donor funds to implement any activity... When donor funds are unavailable, then we can only wait upon the outcomes from the outputs already achieved.....no new activities can be undertaken after donor pull out....."

This qualitative result provides more evidence on lack of project sustainability which agrees with the work of (Oino, Towett, Kirui, & Luvega, 2015) which indicated that majority of agricultural projects have generally been unsuccessful to bring sustainable benefits to the target groups. My study agrees with a research conducted by (EKBOM, KNUTSSON, & OVUKA, 2001) which stated that farmers' ability and willingness to invest in sustainable land management practices are hampered by the limited access to capital.

Item 4b sought to establish whether organizations had effective strategies after donor pull-out to retain the skills that the staff obtained from the project. Therefore, the result had a mean of 3.3869 and standard deviation of 1.20201. The mean shows that there was general agreement by the participants that organizations had effective strategies to retain the staff skills obtained from the project after donor pull-out. Participants agreed that organizations had effective strategies to retain the staff skills obtained from the project after donor pull-out although the mean was on the lowest limit. The same results had data values or scores with a big variance from the mean as shown by a large standard deviation of 1.20201 which means that data is highly spread out from the mean. This indicates that there was no complete consensus in this result among the participants because of the lack of consistency of responses from participants. Further analysis from a project manager in an open ended response stated the following:

"The only way project staff can retain the skills obtained from previous project in this organization is through implementation of similar projects... After-all, they have been implementing projects with similar strategies for years now, which I think should not only retain but also improve their skills. Otherwise, as an organization, we do not have specific strategies to ensure skill retention or improvement."

This result agrees with the quantitative data on one part when the participant said that skills can be retained through implementation of similar project. However, lack of consistency in the quantitative data as shown by a large standard deviation can be supported by the quantitative data when the project managers declared that the organization did not have specific strategies to ensure skill retention and improvement. Item 4c sought to establish the effectiveness of strategies that maintain community acceptance of projects after donor pull out. Therefore, the result had a mean of 3.5036 and standard deviation of 1.02988. The mean showed that there was general agreement by the participants that organizations had effective strategies that maintains community acceptance of projects after donor pull out. The same results had data values or scores with a small variance from the mean as shown by a small standard deviation of 1.02988 which means that data was not spread out from the mean. This indicates that there was high consensus in this result among the participants because of consistency of responses from participants.

Item 4d sought to establish whether organizations had project sustainability strategies. This results has a mean of 2.8467 and standard deviation of 1.33885. The mean showed that participants were of neutral opinion about organizations having project sustainability strategies. The same results had data values or scores with a big variance from the mean as shown by a large standard deviation of 1.33885 which means that data is highly spread out from the mean. This indicates that there was no complete consensus in this result among the participants because of the lack of consistency of responses from participants. Researcher was interested in determining the distribution of responses in terms of frequencies. It was found that out of 137 participants, 68 said that organizations did not have project sustainability strategies 10 were of neutral opinion while 59 said

that organizations had project sustainability strategies. From this results, it can be noted that even though the mean suggested a neutral opinion, majority of the respondents did not believe that organizations had project sustainability strategies. When asked about sustainability of agricultural projects, one of the project managers said the following:

".....We have a lot of good strategies to ensure that projects are sustained even after the exit of donors, however, this are just on papers....the strategies are never implemented...the strategies are simply documented because it's a requirement by funding agencies during application for grants..."

This qualitative result clarifies the quantitative data which, with low consistency of results, found that organizations did not have project sustainability strategies. Qualitative result clarified that the lack of consistency in the participants responses might have occurred due availability of documented project sustainability strategies which were ineffective. The qualitative result states that strategies were only present on papers but the strategies were never utilized which might cause participants to have varied opinion. This result agrees with the work of (Oino, Towett, Kirui, & Luvega, 2015) which stated that although numerous projects highlight fundamentals of sustainability in their proposal stage, the actual implementation still seems to lack emphasis on sustainability.

Item 4e sought to establish availability of strategies to retain project results after donor pull out. This results had a mean 3.6350 and standard deviation of 1.34425. The mean showed that participants generally agreed that organizations had strategies to retain project results after donor pull out. The same results had data values or scores with a big variance from the mean as shown by a large standard deviation of 1.34425. Which means that data is highly spread out from the mean. This indicates that even though there was general agreement with the statement, there was no complete consensus that strategies to retain project results were available after donor pull out. When asked whether or not results are still realized even after donor pull out, one of the project managers said the following:

".....Despite having good strategies on paper to ensure that projects results are sustained even after the exit of donors, sustainability of project results is never attained...the end of projects simply means the end results tracking. After all, there are no funds for tracking results after project has ended"

The qualitative result clarifies the quantitative information, while quantitative result found that there were strategies to retain project results after donor pull out, qualitative results found that project results are never sustained after donor exit. Qualitative results also gave an in-depth understanding of what might be the reason behind project manager's opinion on lack of sustainment of result by saying that there are no funds for tracking results after project has ended and that end of project means end of result tracking. Qualitative results also inform us that strategies to retain project results after donor pull out are just on papers but not implemented upon, this explains why item 4e had a high mean of 3.6350. Just like item 4d which also found that project sustainability strategies were also only documented on papers due to donor requirements but never implemented upon. It can also be said that project manager's opinion which was also shared by other project managers represents variety of opinions as shown by large standard deviation of 1.34425.

This result agrees with the work (Kikwatha, Kyalo, Mulwa, & Nyonje, 2018) which also found that Majority 147(78.2%) agreed with the statement that dairy goat project can continue without external financial and technical support, the result had a mean score (M) = 3.97 and a standard deviation (STD) = 0.620 indicating that dairy goat project can continue without external financial and technical support. However, this result differed from the FGD result as the participants indicated that they would require financial and technical support from donors and the government for the project to continue successfully. Government officials interviewed indicated that without donor funding, the project may not be sustainable since the government financial allocation to dairy goat production sector is insufficient and cannot adequately support the projects.

Item 4f sought to establish whether organization has effective strategies to retain beneficiary skills required for the capacity empowerment after donor pull out. This results has a mean 2.3869 of and standard deviation of 1.23222. The mean showed that there was general disagreement by the participants that organizations had strategies to retain beneficiary skills required for their capacity empowerment after project termination. This shows that organizations did not have effective strategies to retain beneficiary skills required for the capacity empowerment after donor pull out. This result did not have consistency as the responses were spread away from the mean as shown in the larger value of standard deviation.

Item 4g sought to establish availability of effective strategies to ensure farming systems of beneficiaries survives in long term. This results had a mean 2.0584 of and standard deviation of 0.88090. The mean showed that participants generally disagreed that organization had effective strategies to ensure farming systems of beneficiaries survives in long term. The same result had a very small standard deviation which shows that dataset was close to mean and not spread out indicating consensus because of consistency in participant responses. Item 4h sought to establish whether or not the organizations had effective strategies to ensure project sustainability. This results had a mean of 1.9708 and standard deviation of 1.25406. The mean showed that there was general disagreement by the participants that organization had effective strategies to ensure project sustainability. The same result had a small standard deviation which shows that dataset was close to mean and not spread out hence consensus among respondents. This results affirms results for item 4d on whether or not organizations had project sustainability strategies.

Item 4i sought to establish whether or not beneficiaries' farming systems survives in long term despite changing economic context. This results had a mean of 1.6277 and standard deviation of 1.04231. The mean showed that there was general disagreement by the participants that beneficiaries' farming systems survives in long term despite changing economic context. The same result had a small standard deviation which shows that dataset was close to mean and not spread out hence a consensus on this item.

Item 4j sought to establish whether or not organization had effective strategies to retain financial viability of projects after donor pull-out. This results had a mean of 1.3650 and standard deviation of 1.04231. The mean showed that there was general disagreement by the participants that organization has effective strategies to retain financial viability of projects after donor pull-out. Participants therefore believed that organizations do not have effective strategies to retain financial

viability of projects after donor pull-out. The same result had a small standard deviation meaning that there was a consensus among respondents when responding to this item.

Researcher further sought to establish the general mean using actual scores that ranged from 50 (5x10) indicating strongly agree and 10 (1x10) indicating strongly disagree when each values attached to each response were multiplied with the number of total items. The general mean for all item in table 4.10 was found to be 24.7080 with a standard deviation of 4.30998. The value of general mean showed that there was an overall disagreement by the participants with the most of the items that measure sustainability of agricultural projects. The implication here is that agricultural projects were not sustained. The mean had a small standard deviation which shows a consensus among participants on this issue. Results of the interview guides supported this finding in that most of the key informant participants emphasized on lack of project sustainment when asked about their take on the sustainability of agricultural projects in the organization. Participants were convinced that project sustainability was elusive in the organization.

Main gaps noted by interview guide participants were: That finances were highly strained therefore finance resource were only budgeted for until the terminal end of the project and not post project, high employee turnover which worked against efforts meant to maintain skilled staff, glaring lack of project sustainability strategies, and noticeable absence of effective strategies to retain beneficiary skills. My finding on sustainability agrees with the work of (Oino, Towett, Kirui, & Luvega, 2015) which stated that project sustainability is a major challenge not only in Kenya, but also in many developing countries. Most projects implemented at huge amounts often tend to experience difficulties with sustainability. Donors such as the World Bank, DFID, USAID and other bilateral aid agencies have been expressing concerns on project sustainability, while the trend with implementation of projects is showing significant improvement, post-implementation sustainability is rather disappointing with very few projects being sustained.

My study result also confirms the statement of the problem which stated that majority of agricultural projects have generally been unsuccessful to bring sustainable benefits to the target groups, and even though numerous projects highlight fundamentals of sustainability in their proposal stage, the actual implementation still seems to lack emphasis on sustainability (Oino, Towett, Kirui, & Luvega, 2015).

A study conducted by (Kikwatha, Kyalo, Mulwa, & Nyonje, 2018) also investigated project sustainability, and in its findings: The study found a mean score for sustainability as 3.2521 and standard error 0.3072. The measure for sustainability was therefore 3.25 which was neutral opinion in the Likert scale implying that there was the uncertainty about sustainability of dairy goat projects. The same study findings by Kikwatha (2018) was supported by Focus Group Discussions (FGD) which found that participants expressed a mixed reaction when asked if the dairy goat project has been sustainable and has impacted positively on their lives. While study by (Kikwatha, Kyalo, Mulwa, & Nyonje, 2018) found a mixed reaction and uncertainty on project sustainability, my study on the other hand found total lack of project sustainability.

Consequently, while thinking of project sustainability, Oino, (2015) noted that three things must be born in mind; the community, project results and external assistance. A project is sustainable if the community/beneficiaries are capable on their own without the assistance of outside development

partners, to continue producing results for their benefit for as long as their problem still exists. This study shows that community was not capable on their own without the assistance of outside development partners which implied absence of sustainability, this creates a social economic problem in our societies, it makes communities depend of outside assistance instead of solving problems by themselves. Lack of strategies to ensure farming systems of beneficiaries survives in long term after donor pull-out is a precursor to myriad of both environmental and social economic hitches and as noted by Scottish Environment Protection Agency, (2002), sustainability is depicted as three-legged stool consisting of the environment, the economy, and society as the legs. This model treats each of the three pillars as separate and equal entities and if any leg is less important (shorter) or missing the stool was be unstable. However, if all three legs are the same length (each pillar being given equal weight), the result would be a balanced stool that would support sustainable development

ROUTINE PROGRAM MONITORING AND SUSTAINABILITY OF AGRICULTURAL PROJECTS

Routine program monitoring was an independent variable drawn from objective four of the study. The study sought to establish the opinion of the respondents on routine program monitoring as a component of M&E system. Ten items drawn from the questionnaires were analyzed and reported in terms of means and standard deviation. The respondents were asked to rate the statements on the scale of 5 in which 1 denoted strongly disagree, 2 disagree 3 neutral 4 agree and 5 strongly agree. The following scoring was also used: (SD: $1 < SD < 1.8$), (D: $1.8 < D < 2.6$), (N: $2.6 < N < 3.4$), (A: $3.4 < A < 4.2$) and (SA: $4.2 < SA < 5.0$). The mentioned scales give an equidistance of 0.8.

Table 7: Distribution of responses on routine program monitoring

		N	Mean	Std. Deviation
8a	Monitoring system used to report project progress is well defined	137	3.3066	1.21608
8b	Monitoring is used to alert project managers of project deviations	137	3.2993	1.14638
8c	Project progress is reported frequently	137	3.5401	1.25449
8d	Alerting project managers of project deviations is important	137	4.2701	1.12134
8e	Project managers takes necessary actions to avert project deviations	137	2.1971	1.20562
8f	The organization monitors project impacts	137	2.0876	1.20949
8g	The organization uses outcome monitoring to gauge the achievement of results	137	2.2190	1.23500
8h	The organization monitors project outputs regularly	137	4.0584	1.24715
8i	Organizational monitoring strategies are effective	137	2.0146	1.26017
8j	Frequent monitoring of results is important	137	4.2409	.98164

Table 7 shows ten items that measure routine program monitoring, the table presented means and standard deviations.

Item 8a sought to establish whether monitoring system used to report project progress was well defined in the organization. This item had a mean of 3.3066 and standard deviation of 1.21608. The mean showed that participants were of neutral opinion when asked about availability of a well-

defined monitoring system used to report project progress. The result a large standard deviation which means that data was spread away to the mean, implying that participants had varied opinion rather a consensus on the issue which could be seen in the inconsistency in responses provided for by participants on this item. Researcher was still interested in finding out more on distribution of responses on this item, which called for frequency testing. The test showed that out of 137 participants that respondent to this item, a total of 36 participants said that there was no well-defined monitoring system used to report project progress, then 73 of the participants which was majority said that a well-defined monitoring system used to report project progress was available. This result indicates that despite having a general neutral opinion on the item, majority of responses were skewed towards agreeing that there was a well-defined monitoring system used to report project progress.

Results from interview guide as responded by project managers supported the quantitative result. There was a general mixed responses from key informants when they were asked to comment on the status of monitoring as used to track project progress. They also emphasized the importance of routine monitoring on the sustainability of agricultural projects. One of the project managers in an open ended response stated the following:

"Indeed we have a well spelt out monitoring system in our organization.....We would not have an idea of project progress without monitoring. It is an important management tool to enable us takes proper action as we track the results..... The problem is the use of collected data, sometimes it is not put to right use"

This qualitative result provides more insight on item 8a. It informs that monitoring system was available however how the data is used after collection is the challenge. A study conducted by (Zairi, 2005) stated that routine program monitoring generally meant to be aware of the state of a system, to observe a situation for any changes which may occur over time, using a monitor or measuring device of some sort, this emphasizes the importance of monitoring. Khan, (2003) stated that monitoring was an essential process of organizational basic support system that could provide valuable information on the ongoing operations of the organization and on relevant program issues for the management, particularly the program development officers to make accurate and timely decisions.

Item 8b sought to establish whether monitoring was used to alert project managers of project deviations. The item had a mean of 3.2993 and standard deviation of 1.14638. The mean showed that participants were of neutral opinion when asked whether monitoring was used to alert project managers of project deviations. The result a large standard deviation which means that data was spread away to the mean, implying that participants had varied opinion rather a consensus on the issue which could be seen in the inconsistency in responses provided for by participants on this item. Researcher went further to find more on distribution of responses on this item, which called for frequency testing. The test showed that out of 137 participants that respondent to this item, a total of 35 participants said that monitoring was not used to alert project managers of project deviations then 75 of the participants which was majority said that a monitoring was used to alert project managers of project deviations. The result indicates that despite having a general neutral opinion on the item, majority of responses were skewed towards agreeing that monitoring was indeed used to alert project managers of project deviations

Results from interview guide as responded by project managers emphasized the importance of having a monitoring system in the organization so as to understand project progress. However, the project managers said that there was a huge challenge in the use or utilization of the collected data, consequently data is not put to right use. As reported by Khan, (2003) monitoring is an essential process of organizational basic support system that could provide valuable information on the ongoing operations of the organization and on relevant program issues for the management, particularly the program development officers to make accurate and timely decisions. This implies that the use of monitoring to alert project managers of project deviations is important for the sustainability.

Item 8c sought to establish whether project progress was reported frequently. This item had a mean of 3.5401 and standard deviation of 1.25449. The mean showed that there was a general agreement by participants that project progress was reported frequently although the result had a large standard deviation which means that data was spread away to the mean, implying that participants had varied opinion rather a consensus on the issue which could be seen in the inconsistency in responses provided for by participants on this item.

Item 8d sought to establish whether alerting project managers of project deviations is important. The item had a mean of 4.2701 and standard deviation of 1.12134. The mean showed that there was a general agreement by participants that alerting project managers of project deviations was important. The result had a small standard deviation which means that data was not spread away to the mean, implying that participants did not have varied opinion rather a consensus on the issue which could be seen in the inconsistency in responses provided for by participants on this item.

Item 8e sought to establish whether project managers take necessary actions to avert project deviations. The item had a mean of 2.1971 and standard deviation of 1.20562. The mean showed that project managers did not take necessary actions to avert project deviations. The result had a small standard deviation which means that there was a consensus on this issue. Item 8f sought to establish if the organization monitors project impacts. The item had a mean of 2.0876 and standard deviation of 1.20949. The means shows that organizations did not monitor impacts. The small standard deviation shows that participants had a consensus on this item. Item 8g sought to establish whether organization uses outcome monitoring to gauge the achievement of results. The item had a mean of 2.2190 and standard deviation of 1.23500. The mean shows that outcome monitoring was not used to gauge achievements of results. Large standard deviation shows that participants did not have consensus on this item.

Item 8h sought to establish if the organization monitors project outputs regularly. The item had a mean of 4.0584 and standard deviation of 1.24715. The mean shows that outputs were monitored regularly. Item 8i sought to establish whether organizational monitoring strategies are effective. The item had a mean of 2.0146 and standard deviation of 1.26017. The mean shows that organizational monitoring strategies were not effective. The mean had a small standard deviation which shows a consensus among participant when responding to this item.

Item 8j sought to establish whether frequent monitoring of results is important for the stability of M&E system. The item had a mean of 4.2409 and standard deviation of .98164. The mean showed that frequent monitoring of results was important for the stability of M&E system. The mean has a

very small standard deviation implying that there was a consensus among participants when responding to this item. The general mean score for all items was 31.2336 with general standard deviation of 4.82984. The implication of this mean score and standard deviation in respect to the study is that there was general agreement opinion among participants that organizations utilizes monitoring and evaluation system in terms of routine program monitoring. This means that routine monitoring was utilized.

The results from interview guides supported the quantitative results, by agreeing that organization indeed utilized monitoring as required. Project managers were convinced that organizational monitoring system was in good condition, the only challenge that was expressed by project managers concerning monitoring is the utilization of collected data to make corrective measures. It was said that data collected from monitoring was rarely used to make project improvements. Researcher therefore concluded by noting that data collection without proper use is useless and waste of important resources, just like Patton (2008), who argued that monitoring and evaluation can be strong in terms of design and methodology however if the results are not utilized, it remains a bad evaluation.

Consequently, the researcher implies that, even though monitoring was conducted, lack of utilization of monitoring data to make corrective measures might negatively influence sustainability of agricultural projects. This implication agrees with the work of Kontinen and Robinson (2010) which noted that when monitoring faces various challenges, its effectiveness is at stake hence impacting on the project success. Project success in this regard according to Nuguti (2009) is impact, capacity development and project sustainability.

Descriptive analysis of routine program monitoring and sustainability of agricultural projects funded by NGOs

Researcher was also interested in determining the beliefs and opinions of participants on the influence of routine program monitoring on sustainability of agricultural projects. They were asked to select the number that best represents their opinion using 5-point scale. Each construct that measured routine program monitoring formed a research item. Results are tabulated in table 4.32

Table 8: Distribution of responses on the influence of routine program monitoring on sustainability of agricultural projects

		N	Mean	SD
8.1a	Use of monitoring to track project progress help sustain agricultural projects	137	4.2336	1.38406
8.1b	monitoring of impact helps sustain agricultural projects	137	3.0876	1.17244
8.1c	monitoring of outcome helps sustain agricultural projects	137	3.1679	1.24007
8.1d	monitoring of output helps sustain agricultural project	137	2.7737	1.03606
8.1e	Effective monitoring strategies helps sustain agricultural projects	137	4.2117	1.01046

Table 8 shows the descriptive analysis for the influence of routine program monitoring on the sustainability of agricultural projects. The items had a general mean of 17.4745 and general standard deviation of 3.81190. This shows lack of certainty by the participants whether or not that

routine program monitoring helps sustain agricultural projects. Item 8.1a sought to establish whether or not use of monitoring to track project progress helps to sustain agricultural projects. The item had a mean of 4.2336 and standard deviation of 1.38406 which implied that participants agreed that use of monitoring to track project progress helps sustain agricultural projects. Item 8.1b sought to establish whether or not monitoring of impact helps sustain agricultural projects, the item had a mean of 3.0876 and standard deviation of 1.1724 which implied that participants were not sure whether or not monitoring of impact helps sustain agricultural projects.

Item 8.1c sought to establish whether or not monitoring of outcome helps sustain agricultural projects by NGOs, the item had a mean of 3.1679 and standard deviation of 1.24007 which implied that participants were also not sure if monitoring of outcome helps sustain agricultural projects. Item 8.1d sought to establish whether or not monitoring of output helps sustain agricultural projects that are funded by NGOs, the item had a mean of 2.7737 and standard deviation of 1.03606 which implied that participants were of neutral opinion on whether or not monitoring of output helps sustain agricultural projects. Item 8.1e sought to establish whether or not effective monitoring strategies help sustain agricultural projects that are funded by NGOs, the item had a mean of 4.2117 and standard deviation of 1.01046 which implied that participants agreed that effective monitoring strategies help sustain agricultural projects. To understand more on the relationship between routine program monitoring and sustainability of agricultural projects, researcher went ahead to determine the correlation and regression.

Relationship between routine program monitoring and sustainability of agricultural projects

The study sought to establish the relationship between routine program monitoring and sustainability of agricultural projects. The study also tested the null hypothesis that there is no significant relationship between routine program monitoring and the sustainability of agricultural projects. Both correlation index (r) and p-value were computed as shown and presented as shown in table 4.33

Table 9: Correlations between routine program monitoring and sustainability of agricultural projects

Correlations			
		Sustainability of agricultural projects	Routine program monitoring
Sustainability of agricultural projects	Pearson Correlation	1	.059
	Sig. (2-tailed)		.491
	N	137	137
Routine program monitoring	Pearson Correlation	.059	1
	Sig. (2-tailed)	.491	
	N	137	137

Table 9 shows a correlation index $r = 0.059$. This shows a very weak positive correlation between routine program monitoring and sustainability of agricultural projects. Further, the analysis sought to test null hypothesis:

H0: There is no significant relationship between routine program monitoring and sustainability of agricultural projects

The p-values was found to be $p=0.491$ at 0.05 level of significant. This led to a fail to reject null hypothesis that routine program monitoring has no significant relationship with sustainability of agricultural projects.

Regression analysis of routine program monitoring on sustainability of agricultural projects

The study also sought to establish how much routine program monitoring explained variation in the sustainability of agricultural project through regression analysis. The model and the key that used was as follows:

$$y = \alpha + \beta_4 X_4 + \varepsilon$$

y= Sustainability of agricultural projects

a=constant (Y-intercept)

β_4 = Beta coefficient

X_4 = Routine program monitoring

ε = error term

This was presented in tables 9

Table 10: Model Summary for routine program monitoring and sustainability of agricultural projects

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.059 ^a	.004	-.004	3.71600
a. Predictors: (Constant), Routine program monitoring				

Table 4.34 shows a Pearson r of 0.059^a which indicates a very weak positive correlation exhibited between the various bivariate variables. This confirms the correlations value in table 4.33. The results also shows an R^2 of 0.004 which means that 0.4% of the variability of the response variable which was sustainability of agricultural projects was accounted for by routine program monitoring as a component of monitoring and evaluation system. This is a very small value for R^2 therefore it's insignificant. R^2 value is given by the following equation.

$$R^2 = \frac{\varepsilon (Estimate - Mean)^2}{\varepsilon (Actual - Mean)^2} = \text{Regression Sum of Squares / Total Sum of Squares}$$

Table 11: ANOVA table for routine program monitoring and sustainability of agricultural projects

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.574	1	6.574	.476	.491 ^b
	Residual	1864.167	135	13.809		
	Total	1870.740	136			
a. Dependent Variable: Sustainability of agricultural projects						
b. Predictors: (Constant), Routine program monitoring						

Table 11 shows an F-statistic of 0.476 with a p-value of 0.491^b. This is reported as $F = (1,135) = 0.476, p = 0.491, R^2 = .004$. It shows that the regression model hence the variability that was explained for was not statistically significant since the calculated p-value was > 0.05 therefore the null hypothesis which states that there is no significant relationship between routine program monitoring and sustainability of agricultural projects was not rejected. The model $\gamma = \alpha + \beta\chi_4 + \varepsilon$ was not found to be fit since the predictor variable accounted for only 0.4% of the variability of outcome variable and which was not statistically significant.

Table 12: Coefficients between routine program monitoring and sustainability of agricultural projects

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.123	2.085		11.090	.000
	Routine program monitoring	.046	.066	.059	.690	.491
a. Dependent Variable: sustainability of agricultural projects						

Table 4.36 works by substituting the beta value as well as the constant term, the proceeding regression equation model was as follows:

$$Y = 23.123 + .046\chi_4$$

The results in table 4.36 shows that a unit increase in the value of routine program monitoring increased the value of sustainability of agricultural projects by 0.046 times holding other variables constant totaling to 23.583 units for a unit increase in the value of routine program monitoring. This was not high number of units considering the total number of units was 50 from the general mean for all items that was calculated. This contribution was also not statistically significant with a p-value of 0.491.

Inferential analysis pointed to a weak positive relationship between routine program monitoring and sustainability of agricultural projects that could not be inferred due to large error level. Descriptive analysis showed a neutral result on the same. The views of one project manager regarding routine programme monitoring was as follows:

"Frequent monitoring is crucial in the project implementation, however, it's more informative on accountability issues..... monitoring of programmes does not guarantee project sustainability but it's one of the means to it..... sustainability of agricultural projects require more than just frequent monitoring of programmes "

This qualitative result agrees with quantitative inferential results in supporting the fact that monitoring of programmes does not guarantee project sustainability, however, project manager goes ahead to state that monitoring of programmes is one of the means to sustainability of agricultural projects.

Cecil (2012) studied the influence of routine program monitoring on performance of educational projects and asserted that time to time monitoring platforms should be organized during the cycle of project implementation to enhance stakeholder involvement, noting that my first objective found that partnerships for planning M&E significantly influenced sustainability of agricultural projects, routine program monitoring is therefore important aspect in sustainability of agricultural projects as it enhances stakeholder involvement. The study by Cecil (2012) found the following: Inferential statistical analysis showed that a positive correlation of ($r = 0.856$, $p < 0.05$) exists between Routine Programme Monitoring and Performance of educational building infrastructural projects while regression showed that Routine Programme Monitoring ($F = 320.41$, $p < 0.05$) significantly determines ($R^2 = 0.7334$) the performance of the projects with an effect size ($\beta^3 = 0.856$, $p < 0.05$). The findings therefore rejected the H_0 , and the study concluded that Routine Programme Monitoring significantly influences the performance of educational building infrastructural projects in Bungoma county.

Trying to link project performance to project sustainability, researcher acknowledges study conducted by Woodwork and Kelvin, (2006) as cited in the work of in the work of (Mutekhele, Rambo, Ongati, & Nyonje, 2018) which concluded that routine programme monitoring enhances performance of building infrastructural projects in Bungoma County. This however is not the case when my study measured sustainability of agricultural projects. Consequently, researcher can imply that since monitoring enhances performance, then performance is a means to project sustainability because project has to first have good performance before we can think of sustainability, though it is not a guarantee that good project performance will directly lead to project sustainability. This is evidence that routine programme monitoring is important even though it did not significantly influence sustainability of agricultural projects.

CONCLUSION

This study examined the extent to which routine program monitoring influence sustainability of agricultural projects funded by NGOs. The indicators used for this variable were: Monitoring used to track project progress, impact monitoring, outcome monitoring, output monitoring, and availability of monitoring strategies. Results in this section indicated that majority of the respondents were not sure whether or not that routine program monitoring influences sustainability of agricultural projects in terms of sustainability of agricultural projects. On testing for relationship, it was established that routine program monitoring correlated positively with sustainability of agricultural projects with value of $r = 0.059$.

This implied that the more the organization embraced routine program monitoring, the more agricultural projects were sustained. However, this relationship could not be generalized. The study concludes that, even though the null hypothesis was not rejected, correlation analysis showed a positive relationship. Also, interview guides showed the need for effective monitoring where data from monitoring gets to be used for corrective measures. Effective monitoring was termed as “*one of the means to sustainability of agricultural projects*” Therefore routine programme monitoring is important in sustainability of agricultural projects. The study provided an empirical evidence that monitoring used to track project progress, impact monitoring, outcome monitoring, output monitoring, and monitoring strategies are important elements in of routine programme that fortifies sustainability of agricultural projects

RECOMMENDATIONS

The study recommends that monitoring system be installed in all organizations that implement projects with the aim of measuring sustainability. The monitoring system should not only collect data but also make use of the same data for corrective measures. This is because effective monitoring was termed as "*one of the means to sustainability of agricultural projects*" Therefore routine programme monitoring is important in sustainability of agricultural projects. The study provided empirical evidence that monitoring used to track project progress, impact monitoring, outcome monitoring, output monitoring, and monitoring strategies are important elements in of routine programme that fortifies sustainability of agricultural projects

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