



AFRICAN JOURNAL OF BUSINESS AND MANAGEMENT

(AJBUMA)

ISSN 2079-410X



UTILIZATION OF STAKEHOLDER ANALYSIS TOOL AND SUSTAINABILITY OF COMMUNITY AGRICULTURAL PROJECTS SUPPORTED BY CARITAS IN MERU COUNTY, KENYA

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Date Received | Date Accepted
17/04/2023 | 19/06/2023

Abstract

The purpose of the study was to establish the influence of the utilization of stakeholder analysis tools on the sustainability of community agricultural projects supported by Caritas in Meru County, Kenya. A pragmatic research paradigm and a descriptive survey research design were adopted. The target population was 59 smallholder farmer groups and 24 Caritas Meru staff. The sample size was 51 smallholder farmer groups and the total sample size was 177 respondents comprising 153 group leaders and 24 project officers. The data collection tools were a questionnaire and an interview guide. The qualitative data was analyzed by way of grouping similar responses together and identifying the main themes from them. The linear regression and Pearson's correlation (r) methods were utilized to evaluate the link between the variables. Multiple linear regression models determined the link between dependent and independent variables and inferential statistics that informed the decision to reject or not reject the alternative hypothesis. The study found that Utilization of stakeholder analysis $R=57.7\%$ ($P=0.000$) influenced the sustainability of community agricultural projects supported by Caritas in Meru County, Kenya. The study concludes that there is a significant relationship between the utilization of stakeholder analysis as monitoring & evaluation and sustainability of community-based agriculture projects. The study recommends that organizations dealing with the community-based project should utilize stakeholder analysis as a monitoring and evaluation tool to enhance sustainability, train farmers' group leaders on leadership and management skills, and farmers on best farming practices, record keeping, and conflict management.

Keywords: Stakeholder analysis, monitoring and evaluation tools, sustainability, community projects

Introduction

In agriculture, the idea of sustainable development is a problem. Agricultural initiatives and activities must be economically sustainable, environmental conservation and the long-term solution to people's food needs (Zhou, 2010). The sustainability of agricultural projects, therefore, involves activities that aim to maintain farmers, resources and also communities through the promotion of agricultural practices and techniques that are rentable, environmentally sustainable, and beneficial to humans (SARE, 2012). If a project does not retain indefinitely its worth and utility in society, it is not sustainable (Cherfas and Hodgkin, 2011).

Sustainability has been satisfactory for 67 percent of projects assessed in 2007, as compared with 40 percent in 2002, according to the International Fund for Development (IFAD). That only 50% of IFAD's projects assessed in 2007 are moderately sustainable, while 33% remain insufficient; an indication that in most projects' sustainability is a problem. In the UK, Thompson and Holgeid have demonstrated the problem of unsatisfactory projects, whose studies have reported cost overruns of approximately 30%. Also, the study found that the bulk of the project's cost overruns by an average of 200% and almost 70%. Moreover, in 2009, the government of the UK spent £16 billion on IT, with public services proving to be using IT less effectively than the private sector. The failure of communities and other stakeholders to own projects has thus brought massive financial hurdles to communities' projects, threatening survival and regular seizure.

Monitoring helps project stakeholders to determine the progresses that projects have made in the processes of attaining expected results about allocated resources (Laursen,

2018). Because it plays an important role in the evaluation process it forms an important element of program evaluation procedures. The evaluation process relates to the assessment of ongoing processes, designs, policies, and expected results. The evaluation processes aim to provide a timely appraisal of efficiency, impact, relevance, and sustainability against overall objectives. Bengtson, Havila, and Åberg (2018) opine that M&E helps people who implement projects to make informed decisions regarding service delivery, program effectiveness, and operation.

A Stakeholder may be defined as anyone who has a direct or indirect interest in a project and its activities. It would be imperative to note that stakeholders may interfere with project completion at different points because of the diverge of their views (Ingirige, Amaratunga & Kulatunga, 2010). Stakeholders, in general, need to be involved in project management for the sake of enhancing the success of projects. This goes in line with Eskerod and Jepsen (2016) who emphasize that stakeholders have a considerable impact on the sustainability of projects. Based on those different views by different authors about stakeholders and their involvement in projects, it is noteworthy that stakeholders may influence project sustainability, implementation or even performance either positively or negatively. The positive stakeholders view projects positively thereby benefit from their outcomes whereas the negative ones do not see anything good from it; hence, may criticize it for no good reason. As a result, it would be important to address the interests of all stakeholders whether good or bad because they ultimately influence projects sustainability. This simply means that issues raised by negative stakeholders should be addressed with the attention they deserve; otherwise, projects are bound to fail or stall (Littau, Jujagiri&Adlbrecht, 2010).

In Kenya, Caritas has been involved in different projects, for Example, Caritas Nairobi has been involved in a milk project (Caritas Nairobi Report, 2020). As we know, the dairy industry is one of Kenya's key livelihoods, accounting for 12% of farm GDP and employing about 1.8 million families, ensuring around 700,000 jobs (Caritas Nairobi Report, 2020). Unfortunately, most milk is sold informally, resulting in very little earnings for manufacturers. A Quality milk chain vulnerable to climate change is being established to promote access and support local micro-entrepreneurship forms through interventions on 2000 micro-enterprises in Kiambu's four sub-zones. The Programme has turned over the ability of members of society to improve their knowledge of food security and has helped them improve their lives (Caritas Nairobi Report, 2020).

In Meru County, Caritas is a nonprofit faith-based organization under the Catholic Diocese of Meru whose vision is a just, prosperous and self-determined society that upholds human dignity in line with gospel values (Caritas Meru Profile, 2020). The organization supports and encourages communities to meet their demands with a particular focus on vulnerable, undermined and oppressed citizens through capacity building, social-economic development and lobbying. With an overarching aim of economic development and poverty reduction, Caritas Meru has implemented various programmes. It plays a leading role in farming and animal development, water and sanitation, irrigation, health and education (Caritas Meru Profile, 2020).

During the years, Caritas Meru has implemented many active community development projects and resource centres in the dry and semi-arid/marginal regions to increase the capacity to improve the quality of life for rural poor communities. A complex hierarchical framework runs from the Bishop

to the communities, ensures that beneficiaries at all levels interact and participate directly. On the level of the village, the social development bureau (Caritas Meru) sponsored the development of food safety field schools; established local community service providers, and encouraged the formation of small-scale marketing groups of producers to address different commodity value chains for better livelihoods (Caritas Meru,2020).

Problem of Research

There has been quite a number of ventures that have been initiated by various stakeholders in Kenya and across Africa. Unfortunately, most have not served the intended purpose because they don't get to pick up and operate as envisioned. For example, the Lake Turkana fish processing plant in Kenya which was designed in 1971 with an aim of providing jobs to the Turkana people through fish farming. The construction of the plant was completed and operations started but lasted for a few days after which it was shut down. Factors that led to its closure included cost to operate, freezers and the demand for clean water which is not readily available in Turkana being a semi arid region. The Turkana people being nomads with no background knowledge of fish farming could not integrate their lifestyles of nomadism and fish farming.

The Lesotho Highlands water project in South Africa is another example of unsustainable project. The project was started in 1986 with an objective of diverting fresh water from the mountains for electricity and sale to South Africa. Even though the electricity was delivered, it proved costly and the diversion of water was ill advised. The project was abandoned in 2005 and legal action taken against the firms involved. The Roll Back Malaria, across Africa project which was started was established in 1998,

targeting to reduce the malaria infections to less than half by the year 2010. The project was budgeted at about \$1.9 billion yearly in Africa only. The project had however received \$200 million in its kitty by 2012. The underfunding of the project saw the infection rate going up by 12 %. Experts say donors did not honor their pledges, additionally, some programs were subject to political debates like whether or not to purchase low cost generic medicine or what amounts of money should the poor pay for mosquito nets or what sorts of pesticides to use. Due to lack donor funds flow as it was earlier projected the project could not be sustained. This and other examples not highlighted have necessitated further study on factors that perpetuate the continuity of community ventures.

Mutegi (2015) conducted a study on factors influencing the performance of community driven development projects. a case of Kenya Agricultural Productivity Project Meru County, Kenya. The study found that there is a need for initiatives to be undertaken to create awareness and encourage the youth and the educated to take part and own community projects to boost the ability of the local community to plan, design, mobilize resources, make a decision, participate and implement their projects. Murungi (2020) conducted a study on Determinants of Sustainability of Community Based Ecotourism Development Projects in Kenya. A Case of Northern Rangeland Trust Conservancy, Meru County. The study found there is a need for the government and NGOs to encourage the local community to diversify their income-generating activities and venture into bee keeping and supply of goods and services among others. The study also found out that Community Based Ecotourism Projects' stakeholders or partners in Meru should also promote information flow, awareness and communication amongst

themselves to ensure transparency and accountability which are key to the success of community-based enterprises. The researcher recommended that the county government should adopt a more collaborative approach when dealing with community-based county projects.

Based on the findings by Murunga (2020) and Mutugi (2015) there is evidence that there is a challenge when it comes to the sustainability of community agricultural projects in Meru County. Also, the established knowledge gap from the study was the endeavor of this study to discover the influence of the utilization of stakeholder analysis tools on the sustainability of community agricultural projects. Furthermore, M&E tools utilized by Caritas Meru have not been documented. Another problem with the community agricultural projects supported by Caritas in Meru County is that though all of them have sustainability components in their proposals, most do not actualize them. Therefore, the research problem addressed in this study is that despite Caritas investing heavily in community agricultural projects in Meru, the impact of such investment is by and large not felt on the ground hence the need to investigate, establish, and document utilization of stakeholder analysis tool and the sustainability of community agricultural projects supported by Caritas in Meru County, Kenya.

Literature Review and Research Focus

Experience shows that when project managers do not understand the principles of risk management and basic concepts related to sustainability, projects are bound to fail; hence, fail to achieve their goals. To address this challenge, then project managers should understand the basic principles related to managing risks and be able to communicate such challenges to different groups of

stakeholders (Bourne, 2016). In this respect, stakeholder analysis requires those in the management team to foster stakeholders' environments that are able to mitigate risks and hold people to account. The goal should be to develop a culture that appreciates the way risks interact throughout projects' cycles, encourage people to take responsibility for what they do and work in unison to maximize opportunities.

When stakeholders are involved in monitoring resources and identifying deviations in projects, they enhanced projects' sustainability (Njogu, 2016). The author established that when stakeholders were involved in controlling automotive emissions, they enhanced cost efficiency, reduced carbon emissions and operational costs as well as improved customer satisfaction. Moreover, Waithera and Wanyoike (2015) found out that the involvement of stakeholders in evaluation and monitoring has significantly affected the community-based project's sustainability. Similarly, Ruwa (2016) established that stakeholder involvement in M&E processes had positive impacts on community-based projects. Because of this, it would be imperative to note that stakeholders can hold project implementers to account; hence, contribute to project sustainability and improve its efficiency in terms of cost and time.

For project to be successful there must be an effective stakeholder analysis tool. Nyakoyo, and Odhiambo (2020) conducted a study on Stakeholder Involvement and Implementation of Sustainable Community Food Security Projects in Nyando Basin, Kenya. Two hundred and forty-five stakeholders involved in sustainable community food security projects in Nyando basin were interviewed using a questionnaire. Respondents included community farmers drawn from three food community self-help,

groups, county government officials, agricultural extension officers, managers of community based and non-governmental organizations involved in cassava, sorghum and sweet potato farming within the basin. Descriptive and inferential data were analyzed. Descriptive data included frequencies, means and standard deviation. Inferential statistics included correlation coefficient, coefficient of determination, ANOVA and regression coefficient.

The study found statistically significant relationship between stakeholder involvement and implementation of sustainable community food security projects. It is recommended that stakeholder involvement should be enhanced in sustainable community food security projects to promote timely implementation and completion of sustainable community food security projects, reduce the cost of implementation and ensure sustainable farming practices. It is also recommended that stakeholder involvement should be integrated in sustainable community food security policies and projects.

Stakeholder participation in monitoring and evaluation has been identified as one of the practices that influence the performance of the projects. As we have seen from different authors in the literature review stakeholders play a very important role when it comes to project management. Also, there has been evidence on the association between stakeholders and the performance of projects. This has been demonstrated by Abdi (2018) who conducted a study on the influence of monitoring and evaluation practices on project performance in counties the case of Mombasa County, Kenya. One of his variables under study was stakeholder participation. A descriptive study design was employed using a sample of 271 respondents. The questionnaire was the main data collection tool and was based on five-point

Likert scale items. The findings revealed that there were significant and positive associations between stakeholder participation and project performance. The study focused on stakeholder participation as a practice but not as a tool. This study seeks to establish how stakeholder analysis as a tool influences the sustainability of community projects. The study also investigates whether there is any association between utilizing stakeholder analysis as a tool and sustainability of the community projects.

The study was anchored on the Stakeholder Management Theory. The theory states that as interest in stakeholder principles increase, so too has the range of views on the difficulty (Verbeke & Tung, 2013). Minoja (2012) argues that the stakeholder concept may be divided into three most important techniques: descriptive tactics, which depict what takes place, instrumental techniques which define what takes location if, and normative stakeholder idea have at times been eclipsed via fervent, and sometimes personal, exchanges from proponents of the various perspectives.

Production management, as an area of research, has tended to cognizance on

planning and coping with the complicated array of sports required handing over a construction mission, along with a road or constructing (Mok, Shen & Yang, 2015). Being able to manage construction stakeholder's expectations and issues is a crucial capability for managers of production projects, as failure to cope with the ones has led to infinite mission screw-ups, within the principal due to the fact manufacturing stakeholders tends to have the property and functionality to stop production obligations. The fulfilment finishing touch of advent tasks is consequently dependent on meeting the expectation of stakeholders. Stakeholders include customers, task managers, designers, subcontractors, providers, investment bodies, clients, proprietors, employees and nearby companies (Aaltonen & Kujala, 2010). Hence, the stakeholder's management theory was used to discuss the utilization of stakeholder analysis in this study.

The study conceptual framework presents a diagrammatic form of the researcher's conceptualized relationships between the independent and the dependent variables.

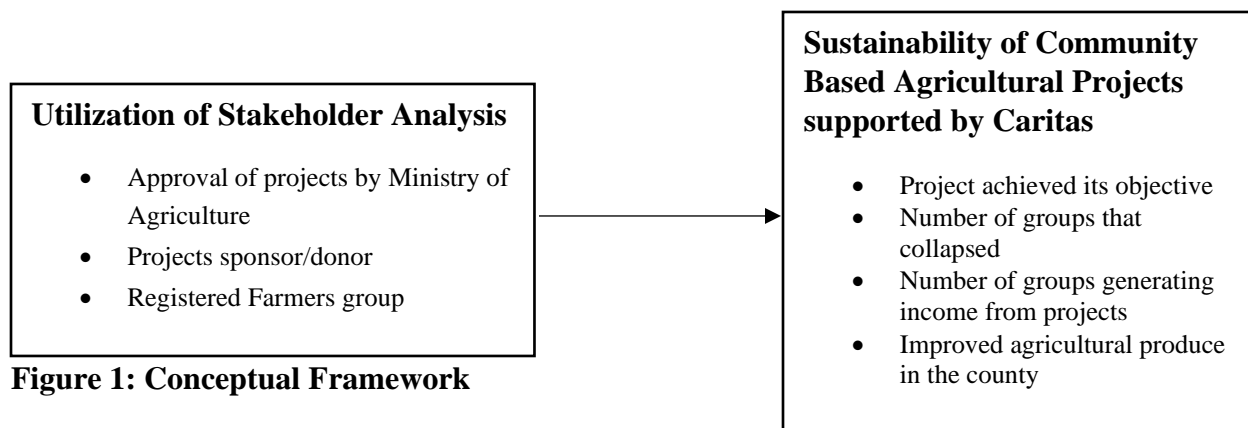


Figure 1: Conceptual Framework

Methodology of Research

General Background of Research

Methodology

This section covers the research methodology and the procedures that were followed in the study. The research was organized in a manner to enable the researcher to carry out a comprehensive study on the utilization of stakeholder analysis tools and sustainability of community agricultural projects supported by Caritas in Meru County, Kenya. The study adopted the pragmatic paradigm and a

descriptive research design. The researcher opted to use a descriptive research design because it ensures a complete description of the situation, making sure that there is minimum bias in the collection and interpretation of data (Kumar, 2019).

Target Population

The target population for this was 59 farmer groups with a total of 997 members (Table 1) plus the 24 Caritas project staff as illustrated in Table 2.

Table 1: Study Target Population for Farmers group.

Sub-county	No. of Groups	Members		Total
		Female	Male	
Buuri	31	271	174	445
Tigania West	14	158	124	282
Imenti Central	14	139	131	270
Total	59	568	429	997

Source: Caritas Meru Records (2021)

Table: 2 Study Target population for Caritas Project Staff.

Category	Target Population
Field Officers	18
Senior administrative staff	3
Project Co-coordinators	3
Total	24

Source: Caritas Meru Records (2021)

Sample of Research

The sample size for this study was 153 farmer groups' leaders plus the 24 Caritas project officers. Hence the total sample size was 177 (Table 3 and Table 4 respectively). The

formula put forward by Silverman (2008) was used to calculate the sample size as follows;

$$n = \frac{X^2 N p q}{\{d^2 (N-1) + X^2 p q\}}$$

Where:

n = Desired sample size

N = Target population (59)

P = population proportion (set to 0.5)

q = 1-p

d = corresponding to the significance level which was the degree of accuracy reflected by the amount of error that was associated with the sample size of the population (set to 0.05)

X² = chi-square value for one degree of freedom relative confidence at 95% confidence level, X=1.96

Therefore, the sample size (n) = $1.96^2 \times 59 \times 0.5 \times 1 - 0.5 / \{0.05^2(59-1) + 1.96^2 \times 0.5 \times 1 -$

0.5\} = 51. Thus the sample size for farmer groups was 51 groups. Proportionate sampling was used to obtain the number of farmer groups per cluster (sub-county) from the total sample size of 51. Three top officials per sub-county were purposely selected to participate in the study resulting to 153 respondents. Since the population for project staff is small the researcher did not sample them, but used census to include all of them in the study. Therefore the total number of respondents in this study was 153 farmer groups' leaders, plus the 24 Caritas project officers. Hence the total sample size was 177 respondents (Table 3.3 and Table 3.4 respectively).

Table 3: Sample Size determination for Famers groups

Sub-county	Target Population	Sample size		Percentage
		Farmer Groups	3 top officials per group	
Buuri	31	27	81	52%
Tigania West	14	12	36	24%
Imenti Central	14	12	36	24%
Total	59	51	153	100%

Source: Caritas

Meru Records (2021)

Table 3: Sample size determination for Caritas Project Staff

Category	Target Population	Census (Sample)
Field Officers	18	18
Senior administrative staff	3	3
Project Co-coordinators	3	3
Total	24	24

Source: Caritas Meru Records (2021)

Instruments and Procedures

The researcher used a structured questionnaire and interview guide to collect data. The sampling techniques used in this study were cluster, simple random, proportionate and purposive sampling. Proportionate sampling was used to obtain the number of farmer groups per cluster from the total sample size of 51. To select the farmer groups from each cluster that participated in the study, simple random sampling was adopted. Purposive sampling was used to select 3 top officials from each farmer group sampled to participate in the study. The census technique was utilized to include all 24 Caritas project staff. The researcher interviewed 3 Caritas senior administrative staff to triangulate the study findings. The rest of the respondents filled in questionnaires.

The completed questionnaires were subjected to data cleaning and categorization. The qualitative data collected using interview guides were analyzed by way of identifying themes. This entailed grouping similar responses together and developing information from them. Linear regression and Pearson's Correlation were utilized to determine the link between dependent and independent variables.

Data Analysis

The descriptive analysis generated data output such as percentages, frequencies, means and standard deviation presented in tabular format for ease of interpretation. The inferential analysis produced linear regression, autocorrelation test, and multicollinearity. Linear regression measures the extent to which there is a linear relationship between two variables. A diagnostic test was carried out to test multicollinearity and normality.

Pearson's Correlation was utilized to determine the link between dependent and

independent variables while linear regression was utilized to determine the moderating effect of the moderating variable. It was also used as the inferential statistics that informed the decision to reject or not reject the alternative hypothesis for the research study. The regression equation was presented as follows.

H₀₁: Utilization of stakeholder analysis does not have a significant effect on sustainability of CBAP supported by Caritas in Meru County, Kenya

$$Y = \beta_0 + \beta_1 X_1 + \alpha$$

Where: Y= Sustainability of CBAP supported by Caritas in Meru County, Kenya

β_0 = Y-intercept

X₁ = stakeholder analysis

100

α = random error (presumed to be 0.)

Results of Research

The researcher assessed whether agricultural projects achieved their intended purpose as it was planned. The result returned a mean score of 4.2414 and a standard deviation of 0.55798 (Table 5). Respondents agreed that the agricultural project achieved its intended purpose as it was planned. A mean score of 4.0632 and Std. Deviation of 0.90696 indicated that the respondents agreed the number of agricultural projects managed by farmers is above 50%, the respondents were undecided or neutral that some groups have collapsed due to mismanagement the recorded mean was 3.0862 with Std. Deviation of 1.18201, the respondents agreed that the projects run by the farmers are generating income the recorded mean was 3.9943 with Std. Deviation of 0.87017, Lastly respondents strongly agreed members are trained on modern farming methods, the recorded mean was 4.1092 and Std. Deviation of 0.57363. These findings suggest

that community agricultural projects supported by Caritas are owned by the community hence they are sustainable.

Table 5: Sustainability of community agricultural projects

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Dev.
The agricultural project achieved its intended purpose as it was planned	174	3.00	5.00	4.2414	.55798
The number of agricultural projects managed by farmers is above 50%.	174	1.00	5.00	4.0632	.90696
Some groups have collapsed due to mismanagement	174	1.00	5.00	3.0862	1.18201
The projects run by the farmers are generating income	174	1.00	5.00	3.9943	.87017
Members are trained on modern farming methods	174	3.00	5.00	4.1092	.57363
Valid N (listwise)	174				

Source; field survey (2021)

The researcher interviewed 3 Caritas senior officers and they were asked to comment on the sustainability of community agricultural projects supported by Caritas in Meru County. Interviewee number 1 had this to say:

“Well, most projects supported by Caritas Meru have benefited the local community. Some started with 5 chickens 5 years ago but as we speak, they have hundreds, they supply eggs and chicken to hotels and they educate their children from the project”

Interviewee number 2 said the following;

“Majority of these projects are fully owned by the community, especially the projects that started 5 years ago. The community generates income from these projects”

Interviewee number 3 said the following:

“Actually, most projects supported by Caritas are the main source of livelihood for the

beneficiaries. For example, those that keep improved goats get enough milk for their families and for sale. They rent he-goats to neighbors to breed theirs, sell, and even slaughter to eat.”

Based on the comment made by Interview no 1, 2 & 3, it is a clear indication that Caritas projects are very helpful to the community in terms of development. This is also an indication that these projects are fully owned by the community. Interviewees’ numbers 1, 2, and 3 were asked how they ensure the projects’ continuity after donor funds. They were probed on the financing of future running costs and measures envisaged to enable the work to continue with funding from its resources, without external assistance, in future.

Interviewee no 1 had this to say:

“Members are trained in bookkeeping, those who keep cows or goats are trained on animal

health and how to care for them. Those growing crops are members of water projects and trained on modern farming methods”

Interviewee no 2 had this to say:

“We encourage members to have groups and save a certain percent of the money from the profit they get in those projects. That money is dedicated to running those projects, we also link the farmers with buyers for example those who want to sell their chickens or eggs. Once we connect the farmers with buyers they can sell their products and create a sustainable long-term business relationship”

Interviewee no 3 had this to say:

“Members chose the agricultural activities they have passion for which gives them motivation to push on. Initially, they were taken through training to equip them with the relevant management skills and knowledge to propel their projects. In any case, the income the projects generate motivates farmers to continue.”

Based on answers given above by interviewees 1, 2, and 3 on projects’ continuity after donor fund, the findings imply that Caritas has a strategic plan that ensures that all the projects that they initiate targeting community members are sustainable even after the donor withdraws.

Utilization of stakeholder analysis as a monitoring and evaluation tool

This section presents the Likert scale Analysis on the utilization of stakeholder analysis as identified as the independent variable. The study examined the utilization of stakeholder analysis using the following

indicators; Approval of projects by the Ministry of Agriculture; Projects sponsor/donor and Registered Farmers group. “Respondents were asked to provide answers on 5 Likert items in the questionnaire that were measured by a five-point Likert scale. Where 5= strongly agree, 4= Agree, 3=Neutral, 2=Disagree and 1=strongly disagree. The mean of each item was computed to assess the extent to which respondents agreed with the views expressed in the item. The Likert scale mean score will be interpreted as;”1.00 to1.49 Strongly Disagree; 1.5 to 2.49 Disagree 2.50 to 3.49 Undecided; 3.50 to 4.49 Agree 4.50 to 5.00 Strongly Agree

The study found out that a mean of 4.0747 and Std. Deviation of 0.56909 of the respondents agreed that the projects were approved by the ministry of agriculture (Table 6). A mean score of 4.0747 and Std. Deviation 0.67159 indicated that the respondents agreed that farmers groups are registered and have the certificate. A mean score of 3.8103 and Std. Deviation of 0.73217 indicated respondents agreed that the project’s sponsor plays a key role in ensuring the sustainability of projects. The respondent agreed that various stakeholders were consulted this recorded a mean score of 3.8046 and a Std. Deviation 0.50061. The study found out that respondents agreed that Stakeholders played a role in uncovering project risks this was shown by a mean score of 3.9138 and Std. Deviation 1.13205. The findings imply that there was proper utilization of stakeholder analysis as monitoring and evaluation tool.

Table 6: Utilization of stakeholder analysis as monitoring and evaluation tools

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	
The projects were approved by the ministry of agriculture	174	3.00	5.00	4.0747	.56909	
Farmers groups are registered and have the certificate	174	2.00	5.00	4.0747	.67159	
The project's sponsor plays a key role in ensuring the sustainability of projects	174	1.00	4.00	3.8103	.73217	
Various stakeholders were consulted	174	3.00	5.00	3.8046	.50061	
Stakeholders played a role in uncovering project risks	174	1.00	5.00	3.9138	1.13205	
Valid N (listwise)	174					

Correlation Utilization of stakeholder analysis and Sustainability of community agricultural projects

Correlation coefficients were the statistical method utilized to explore the variables: Sustainability of projects (The agricultural project achieved its intended purpose as it was planned) and Utilization of stakeholder analysis (Approval of projects by Ministry of Agriculture; Projects sponsor/donor and Registered Farmers group). The results of the correlation analysis are presented in (Table 4.7). The findings reveal that there was a strong negative $r=0-.658^{**}$ between the projects being approved by the ministry of agriculture and the sustainability of community-based agricultural projects, the correlation was found to be statistically significant at 1% since the p-value of 0.000

was less than 0.01. The study established there was a positive correlation $r=0.461^{**}$ between farmers groups being registered and have the certificate and sustainability of community-based agricultural projects, also the correlation was found to be statistically significant at 1% since the p-value of 0.000 was less than 0.01. Lastly, there was a negative correlation between the project's sponsor playing a key role in ensuring the sustainability of projects and sustainability of community-based agricultural projects the correlation was found to be statistically significant at 1% since the p-value of 0.000 was less than 0.01. These findings imply that an increase in the utilization of stakeholder analysis leads to an increase in the sustainability of the

community-based agricultural project by Caritas in Meru County and vice versa.

Table 7: Correlation utilization of stakeholder analysis and Sustainability of community agricultural projects

		Sustainability of the community-based agricultural project	The projects were approved by the ministry of agriculture	Farmers groups are registered and have the certificate	The project's sponsor plays a key role in ensuring the sustainability of projects
Sustainability of the community-based agricultural projects	Pearson Correlation	1	-.658**	.461**	-.354**
	Sig. (2-tailed)		.000	.000	.000
	N	174	174	174	174
The projects were approved by the ministry of agriculture	Pearson Correlation	-.658**	1	-.151*	.492**
	Sig. (2-tailed)	.000		.047	.000
	N	174	174	174	174
Farmers groups are registered and have the certificate	Pearson Correlation	.461**	-.151*	1	-.359**
	Sig. (2-tailed)	.000	.047		.000
	N	174	174	174	174
The project's sponsor plays a key role in ensuring the sustainability of projects	Pearson Correlation	-.354**	.492**	-.359**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	174	174	174	174

Model Summary

The coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (sustainability of community agricultural projects) that is explained by all the independent variables (utilization of

stakeholder analysis) which is measured by the following indicators (Approval of projects by Ministry of Agriculture; Projects sponsor/donor and Registered Farmers group). The three indicators that measure an independent variable that was studied, explain only 57.5% of the effects of the predictors on the sustainability of community-based agricultural projects as represented by the R² which means that other

factors not studied in this research contribute 42.5 % of the effects of the independent variables on the sustainability of the projects.

Table 8: Model of Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.758 ^a	.575	.567	.36709

a. Predictors: (Constant), Project's sponsor plays a key role in ensuring the sustainability of projects, Farmers groups are registered and have the certificate, The projects were approved by the ministry of agriculture

ANOVA Model

Study findings in ANOVA (table 9) indicated that the above-discussed coefficient of determination was significant as evidenced by an F ratio of 76.570 with a p-value 0.000 <0.01 (level of significance). Thus, the model was fit to predict the sustainability of community agricultural projects supported by Caritas in Meru County using the Utilization

of stakeholder analysis as a monitoring and evaluation tool.

Table 9: ANOVA Model

ANOVA^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.954	3	10.318	76.570	.000 ^b
	Residual	22.908	170	.135		
	Total	53.862	173			

a. Dependent Variable: Sustainability of community-based agricultural projects

b. Predictors: (Constant), Project's sponsor plays a key role in ensuring the sustainability of projects, Farmers groups are registered and have the certificate, The projects were approved by the Ministry of Agriculture

Hypothesis Testing

The results of quantitative data were further subjected to regression analysis to test the hypothesis on this variable

H₀1: Utilization of stakeholder analysis tool does not have a significant effect on the sustainability of community agricultural projects supported by Caritas in Meru County, Kenya

$$Y = \beta_0 + \beta_1 X_1 + \alpha$$

Where: Y= Sustainability of CBAP supported by Caritas in Meru County, Kenya

β_0 = Y-intercept

X_1 = stakeholder analysis

α = random error (presumed to be 0.)

The result of the test is represented in (table 10).

Findings in Table 10 showed that projects being approved by the Ministry of Agriculture had coefficients of the estimate which was significant based on $\beta_4 = 0.639$ (p-value = 0.000 which is less than $\alpha = 0.01$), an indication that there was an association. Farmers groups being registered and having

the certificate had coefficients of the estimate which was significant based on $\beta_4 = 0.334$ (p-value = 0.000 which is less than $\alpha = 0.01$) which means there was an association. The project's sponsor playing a key role in ensuring the sustainability of projects had coefficients of the estimate which was significant basing on $\beta_4 = 0.084$ (p-value = 0.071 which is greater than $\alpha = 0.05$ which means there was an association. Therefore, we reject the hypothesis and conclude that there is a significant relationship between the utilization of stakeholder analysis as monitoring & evaluation tool and sustainability of community agriculture projects.”

Table 10: Coefficient estimate

Coefficients		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	5.162	.313		16.509	.000
	The projects were approved by the ministry of agriculture	-.639	.056	-.652	-11.337	.000
	Farmers groups are registered and have the certificate	.334	.045	.402	7.500	.000
	The project's sponsor plays a key role in ensuring the sustainability of projects	.084	.046	.111	1.819	.071

a. Dependent Variable: Sustainability of community-based agricultural projects

Discussion

The study found that projects were approved by the Ministry of Agriculture farmers groups

are registered and have the certificate; various stakeholders were consulted and stakeholders played a role in uncovering

project risks. The findings imply that there was proper utilization of stakeholder analysis as a monitoring and evaluation tool. The study found that an increase in the utilization of stakeholder analysis leads to an increase in the sustainability of the community-based agricultural project by Caritas in Meru County and vice versa. The study found that there is a significant relationship between the utilization of stakeholder analysis in monitoring & evaluation and sustainability of community-based agriculture projects.

This goes in line with Eskerod & Jepsen (2016) who emphasize that stakeholders have a considerable impact on the sustainability of projects. Based on those different views by different authors about stakeholders' involvement in projects, it is noted that stakeholders may influence project sustainability, implementation, or even performance either positively or negatively. When stakeholders are involved in monitoring resources and identifying deviations in projects, they enhanced projects' sustainability (Njogu, 2016). Waithera and Wanyoike (2015) found that the involvement of stakeholders in evaluation and monitoring has significantly affected the community-based project's sustainability. Similarly, Ruwa (2016) established that stakeholder involvement in M&E processes had positive impacts on community-based projects. Because of this, it would be imperative to note that stakeholders can hold project implementers to account; hence, contributing to project sustainability and improving its efficiency in terms of cost and time.

Conclusion and Recommendations

The findings reveal that there was a strong negative correlation $r=0-.658^{**}$ between the projects being approved by the Ministry of Agriculture and the sustainability of community-based agricultural projects, the

correlation was found to be statistically significant at 1% since the p-value of 0.000 was less than 0.01. The study established there was a positive correlation $r=0.461^{**}$ between farmers groups being registered and have the certificate and sustainability of community-based agricultural projects, also the correlation was found to be statistically significant at 1% since the p-value of 0.000 was less than 0.01. Lastly, there was a negative correlation between the project's sponsor playing a key role in ensuring the sustainability of projects and the sustainability of community-based agricultural projects the correlation was found to be statistically significant at 1% since the p-value of 0.000 was less than 0.00.

The researcher found out that the project is approved by the Ministry of Agriculture had coefficients of the estimate which was significant based on $\beta_4 = 0-.639$ (p-value = 0.000 which is less than $\alpha = 0.01$), an indication that there was an association. Farmer groups being registered and having the certificate had coefficients of the estimate which was significant based on $\beta_4 = 0.334$ (p-value = 0.000 which is less than $\alpha = 0.01$) which means there was an association. The project's sponsor playing a key role in ensuring the sustainability of projects had coefficients of the estimate which was significant based on $\beta_4 = 0.084$ (p-value = 0.071 which is greater than $\alpha = 0.05$ which means there was an association. Therefore, we rejected the hypothesis and concluded that there is a significant relationship between the utilization of stakeholder analysis in monitoring & evaluation and the sustainability of community-based agriculture projects.

The study recommends that organizations dealing with community-based projects should utilize as many M&E tools as possible to enhance sustainability. To ensure the sustainability of community-based

agricultural projects, the organization should train farmer group leaders on leadership and management skills. The organization should train farmers on best farming practices, record keeping, and conflict management practices to avoid the collapse of groups

Acknowledgements

I thank my co-authors Prof. Dorothy Kyalo Ndunge and Dr. Angelina Sabina Mulwa for their immense contribution and availability when needed for consultations. The university library staff too deserve my appreciation for guiding me in accessing relevant journals and publications for literature review.

I also thank the Caritas Meru staff for their cooperation and assistance when I was collecting data. My special gratitude goes to Claudio, Ernst, late Antony, Fr. Philippe Deroo and Dr Pierre Benoit (and his wife Marie-Annick) for their moral and financial support without which it could have been extremely difficult for me to complete this paper.

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