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## **EFFECT OF MONITORING AND EVALUATION ON THE SUCCESS OF AGRICULTURE DEVELOPMENT PROJECT IN RWANDA: CASE OF PLANTWISE PROJECT, RAB.**

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### **ABSTRACT**

The objective of the study was to analyze the Effect of Monitoring and Evaluation on the Success of PLANTWISE project in Rwanda Agriculture and Animal Resources development Board (RAB), Rwanda County. The researcher was guided by the following specific objectives; to analyze the effect of Staff technical Skills on monitoring and Evaluation on PLANTWISE Project Success in RAB, assess the effect of Tools and techniques used in monitoring and evaluation on the success of PLANTWISE project in RAB, analyze the effect of stakeholders involvement and participation on the Success of PLANTWISE project in RAB and analyze the effect of Technology use on the success of PLANTWISE Project in RAB. The researcher adopted a descriptive and correlation research design. It used both qualitative and quantitative approaches. The target population of this CABI founded Agriculture Development project is equal to 128 people working in Plantwise Project. A sample selected was comprised of 56 persons who were identified using Sloven sampling formula. In addition, 26 people that Project beneficiaries working with PLANTWISE Project was formed a part of the sample size in all as well as 15 Person from the Project Stakeholder have been selected as respondent, a purposefully sampling method was used to get intended respondents. Printed questionnaires and interviews were given out to a sampled number of study respondents. The tool of analysis that the researcher used is the SPSS which was helped to summarize the primary data into quantitative data and the researcher was given the proper interpretation of the results basing on research objectives and questions. The results indicated  $p < 0.05$  with a Pearson correlation coefficient of 0.7669. This indicates that Staff technical Skills in monitoring and evaluation has significant relationship with project success of PLANTWISE project in RAB. Correlation results indicate a probability value of 0.000 that is less than significant level (0.05) and a Pearson coefficient of 0.686 indicating that Monitoring and Evaluation Tools and Techniques has significant relationship with success of PLANTWISE project in RAB. The results indicated  $p < 0.05$  with a Pearson correlation coefficient of 0.663. This indicates that stakeholders' involvement and participation has significant relationship with the Success of PLANTWISE project in RAB. The results indicated  $p = 0.000 < 0.05$  with a Pearson correlation coefficient of 0.658. This indicates that Technology use in monitoring and evaluation has significant relationship with the Success of PLANTWISE project in RAB. The results indicate model summary on Technology use, Staff technical Skills, stakeholders involvement and participation, Tools and techniques in M&E and project success. The value of R was 0.796, the R Square was 0.633, and the adjusted R Square of 0.604 means that Success of PLANTWISE project in RAB at 63.3%. It is imperative that RAB starts or involves income generating activities for reducing the dependence on the donor's fund. There is need for RAB (project activities implementer) to collocate more resources on M&E activities, so that the progress on implementation can be timely monitored and the impact measured upon completion of project activities.

**Key words:** Monitoring and Evaluation, technical Skills, Tools and techniques, stakeholders involvement, Technology use and project success

## INTRODUCTION

The project and program success is a critical to achieve the development of Agriculture project agenda in the local communities in the worldwide. It is also understandable that Monitoring & Evaluation (M&E) of projects carried out by an institution is a fundamental because the project objective is achieved through it. M&E of project helps to improve an overall efficiency of project planning, management and implementation. Therefore, different projects are initiated for the transformation of social, political and economic wellbeing of the people within the country (Jm,2000).

Rwanda Agriculture and Animal Resources Development (RAB) needs to determine if resources provided by donors are being used efficiently and effectively. The determination of efficient management of the resources is a factor of project M&E activities, and also determines whether the set objectives have been achieved and extent of achievement, plus capture of any lessons learned from the implementation of the projects to aid future projects as the main function of the project evaluation (McCoy *et al.*, 2005).

However, some Institutions seemingly undertake evaluation to satisfy donors or when particular problems arise. On the hand, attention for M&E is not consistent across a project life cycle where in most cases, monitoring concentrates on financial and organizational measures at the same time as program indicators are given a lesser focus.

Therefore, organizations need to be accountable to program or project stakeholders through effective communication of achievements towards public. This cannot be achieved unless there is a well-established M&E system that enables projects or programs to collect, to record, analyze and communicate all useful information relevant to the implementation of project activities and their outcomes in reference to the anticipated outcomes (Gilliam *et al.*, 2003).

This research wants to identify the effect of M&E on success of the project in their working environment. This was done through a case study of PLANTWISE Project operating in RAB as there is still empirical gap on the use of M&E on success of the project implemented by Rwanda Agriculture Board This research is going to fill this knowledge gap.

### General Objective of the Study

The objective of the study was to analyze the Effect of Monitoring and Evaluation on the Success of PLANTWISE project in Rwanda Agriculture and Animal Resources development Board (RAB), Rwanda County.

### Specific objectives

The researcher was guided by the following specific objectives.

- i. To analyze the effect of Staff technical Skills on monitoring and Evaluation on PLANTWISE Project Success in RAB.
- ii. To assess the effect of Tools and techniques used in monitoring and evaluation on the success of PLANTWISE project in RAB.
- iii. To analyze the effect of stakeholders involvement and participation on the Success of PLANTWISE project in RAB.
- iv. To analyze the effect of Technology use on the success of PLANTWISE Project in RAB.

### **Research hypotheses**

The researcher was guided by the following research hypotheses.

H0: There is no effect of Monitoring and Evaluation on the Success of PLANTWISE project in RAB.

H0<sub>1</sub>: Staff technical Skills in monitoring and evaluation has no significant effect on project success of PLANTWISE project in RAB.

H0<sub>2</sub>: Monitoring and Evaluation Tools and Techniques has no significant effect on the success of PLANTWISE project in RAB.

H0<sub>3</sub>: stakeholders' involvement and participation has no significant effect on the Success of PLANTWISE project in RAB.

H0<sub>3</sub>: Technology use in monitoring and evaluation has no significant effect on the Success of PLANTWISE project in RAB.

### **LITERATURE REVIEW**

This chapter discusses the available literature related to the study. It involved the review of the empirical literature in relation to the projects objectives, the review of the literature, review of the theoretical literature and the conceptual framework.

### **Empirical Review**

The section below discussed empirical review from previous scholars in relation to the objective of this study.

### **Staff Monitoring and Evaluation Skills and Project Success**

M&E practices cannot function effectively without the presence of skilled people who successfully execute the M&E tasks for which they are responsible (Kiura, 2017). It is therefore necessary to have officials or consultants who are highly skilled in M&E in order to ensure effective practice of M&E. Understanding the skills required and the capacity of people involved in the M&E practices including addressing capacity gaps through structured capacity development programs is the heart of the M&E system (Gorgens & Kusek, 2010).

M&E requires a specific skills and expertise like M&E design skills especially logframe design, indicator setting, setting a questionnaires and focus discussion guides and others 26 necessary skills including the data collection skills such as conducting interviews, conducting focus group discussion, data analysis and report writing skills (Hughes, 2002). According to Kelly and Mugongo (2004), noted that they must be the availability of skills in the NGOs but not all of it and in their research they noted that skills such as advanced data analysis, carrying out focus groups discussions while the qualitative indicator setting are very scarce amongst the local NGOs in Swaziland. According to Gyorkos, (2003) argues that this challenge is translated into shortage of quality data which help to make the decision –making on the project to be based on intuition not solid data.

M&E practices cannot function effectively without the presence of skilled people who successfully execute the M&E tasks for which they are responsible (Kiura, 2017). It is therefore necessary to have officials or consultants who are highly skilled in M&E in order to ensure effective practice of M&E. Understanding the skills required and the capacity of people involved in the M&E practices including addressing capacity gaps through structured capacity development programs is the heart of the M&E system (Gorgens & Kusek, 2010).

On the other hand, human capital, with proper training and experience is vital for the production of M&E results. There is need to have an effective M&E human resource capacity in terms of quantity and quality, hence M&E human resource management is required in order to maintain and retain a stable M&E staff (World Bank, 2011). This is because competent employees are also a major constraint in selecting M&E systems (KoffiTessio, 2002). M&E being a new professional field, it faces challenges in effective delivery of results. There is therefore a great demand for skilled professionals, capacity building of M&E systems, and harmonization of training courses as well as technical advice (Gorgens and Kusek, 2009).

### **M&E Tools and techniques uses and Project Success**

In a study conducted by Dayson (2010), the importance of M&E technical activities was confirmed by defining monitoring as the collection along the analysis of information regarding a given program or intervention, while evaluation is an assessment whose focus is to answer the questions related to program or intervention. These general activities of M&E support keeping all the work on track and can let the management know whether things are not running as expected. The technical activities of M&E support project managers and staff undertaking whether the projects are processing as predetermined (Houston, 2008). In addition, Shenhar (2011) pointed that M&E technical activities should bring a resonate way of considering achievements, as this overtime will help meeting the community needs which indicate good performance of the project, leading towards successful projects.

Abdullah et al. (2010) argue that these systems are actually one of the “techniques” for managing program / project implementation, especially because they provide an early warning to project management about potential or actual problems. Subsequently, when problems are identified, this may raise questions about assumptions and strategy behind a given program or project.

Results-Based Monitoring and Evaluation Systems are tools for managing and tracking progress in programmes and projects. Contrary to Implementation-Focused Monitoring, Hyväri (2006) argue that Results-Based Monitoring and Evaluation Systems capture information on the success or failure of development program in achieving desired outcomes, and there is a systematic reporting on the progress towards outcomes. Results Monitoring Systems are designed to help answer questions such as: What are the goals of the organization? Are they being achieved? How can achievement be proven? Results-Based Monitoring and Evaluation Systems differ from Implementation-Focused Monitoring and Evaluation Systems in that they move beyond an emphasis on inputs and outputs to a greater focus on outcomes and impacts.

There are various reasons that make the monitoring activities important and the progress report necessary. The monitoring is a crucial part of the project management as it is carried out to observe the progress of the project implementation in order to ensure if inputs, activities, outputs and project assumptions are proceeding according to the plan and if they are progressing forwards achieving the project objective. Monitoring is also a tool to identify problems that may occur during the project implementation, therefore the corrective measures could be taken before the project is affected adversely. Moreover, as a result of the monitoring, the progress reports provide a major information input to the project reviews. (Chinnanon, 2002).

### **Stakeholders involvement and participation and Project Success**

Stakeholders include target groups, direct beneficiaries, those responsible for ensuring that the results are produced as planned, and those accountable for the resources that they provide to the programme or project (Nabris 2002).

According to Gray (2007), one of the objectives of team building sessions it to establish the „we“ as opposed to „us and them“ attitude among different participants towards the project.

According to Pollnac & Pomerey (2005) donor led and top-down projects generally fail to bring sustainable benefits because they don’t lead to stakeholder ownership and commitment. Kolb & Frohman (1970) views client consultation as that first stage in a program to implement change. Client consultation expresses the necessity of taking into account the needs of the future clients or users of the project. It is therefore important to determine whether the beneficiaries for the project have been indentified this way, the project manager is able too accurately determine in their needs are met.

Okun (2009) in his study on factors that influence the performance of donor funded projects concluded that the key factors that were found to affect the sustainability of donor funded projects were donor policies and the management system adopted by the implementing organization, existing financial systems, technology adopted, participation and involvement of stakeholders and the target beneficiaries.

Nduta (2008) in her study on factors influencing performance of kazi Kwa Vijana projects in Kenya: A case of Githunguri district noted that despite the high involvement of project beneficiaries, the project performance remained poor.

### **Information System (Use of Technology) and Project Success**

There is an increasing interest in the using of information technology in the practice of M&E activities. According to Gyorkos (2003a), information technology plays a big and important role in data recording, data processing and analysis (with some computer based application such as SPSS, Excell, and Access) and provides a base for interpretation of findings and results. The Management of information and reporting system can be more effectively managed and the dissemination of results enhanced.

Information collection on project performance during monitoring and evaluation leads to accumulation of data depending on how complex the project is. If this large amount of information has to add value to project management, there is a need to decide how to make it useful or to analyze it. As stated by Shapiro (2001), data analysis is the process of turning the detailed information into an understanding of patterns and interpretations. The starting point for analysis in a project is to have arranged set of data, thus the concept of information system as an M&E activity (Technopedia, 2013).

Although, reports submission and sharing of M&E information is an important practice during project implementation, only few studies focused on this manner. However, in this study, the researcher was keen to explore the effect of M&E use of Technology in project performance based on the RBM theory. As stated by SIDA (2014), people often think of reporting when they think of RBM. As RBM supports management and accountability which are also related with report production on results and resources; in a survey by KPMG (2014), stated that there is a need for stronger and more timely feedback loops to synthesize and act on lessons learned, explaining this further that reports produced using Technology which are not in timely manner misses the opportunity to share the results and obtain the lessons learned. This was also explained by Hubert and Mulyungi (2018), that M&E activities have significant impact on the success of the projects because the regular reporting on the project allows opportunities to measure project performance against the project plans (Hubert & Mulyungi, 2018).

### **Theoretical Framework**

#### **Program Theory**

The theory was developed by Weiss (1972) and recommended the use of flow diagrams to model the sequence of steps between a program intervention and the desired results during monitoring and evaluation. This is the informal model that helps the evaluator to identify the variable to be included in the assessment, to discover where the sequence breaks down in the chain of events, and to stay tuned for changes in program implementation that are likely to occur. This theory is related to this study, because, during the monitoring and evaluation, monitoring specialist need to prepare a sequence of plan and programme of activities to be monitored and evaluated and prepare related plan to avoid monitor and evaluate what is not needed or any other minor activity that may not have an effect on project performance. This theory is in the form of an organizational plan describing how to gather, configure and deploy resources and organize program activities in order to develop and maintain the desired service system [4]. The theory also discusses the service utilization plan, which examines how the intended target population receives the intended amount of the intended intervention through interaction with the program's service delivery system.

#### **Theory of change**

The theory of change is part of the program theory that emerged in the 1990s as an improvement to the evaluation theory (Stein and Valters, 2012). A theory of change is a tool used for developing solutions to complex social problems. It provides a comprehensive picture of early and intermediate term changes that are needed to reach a long-term set goal (Anderson, 2005). It therefore provides a model of how a project should work, which can be tested and refined through monitoring and evaluation.

A theory of change is also a specific and measurable description of change that forms the basis for planning, implementation and evaluation. Most projects have a theory of change although they are usually assumed (CARE, 2013). The theory of changes helps in developing comprehensible frameworks for monitoring and evaluation project. It is mainly used by local government in the implementation of donor's project to articulate long term impact on projects (James, 2011)

### Result Based Management Theory

During the 1980s, the Australian government pioneered the results-based management (RBM) philosophy, which gained traction in the 1990s thanks to the Organization for Economic Cooperation and Development (OECD) (OECD). This idea, as the name says, is all about the end result. After studying earlier theories including public administration, program management by activity, management by objectives, new public management (NPM), and total quality management (TQM), the Results Based Management Group (RBMG) saw how the results-based theory evolved through time.

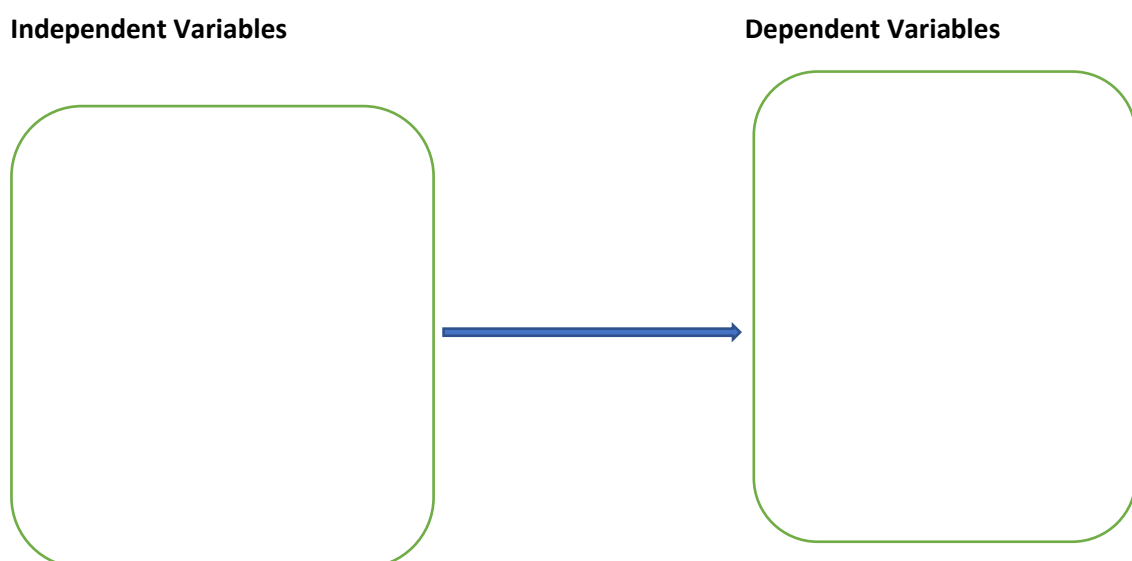
The RBM strategy is one of the methods of management. In order to achieve long-term results, all players on the ground who have a hand in achieving particular development goals must make sure that their procedures, products, and outputs do so (Crawford and Bryce, 2013). To ensure responsibility, RBM is based on well stated standards. In addition to defining the final outcomes, the plan also requires monitoring and self-assessment of progress toward sustainable results, such as a record of performance (UNDP, 2012).

For this study, RBM's used to assess outputs initiative while also attempting to guarantee that it satisfies several quality standards, such as those for relevance, efficiency, success, and influence.

### Conceptual Framework

This section discusses the conceptual framework for analyzing the Effect of Monitoring and Evaluation of project performance in Rwanda Agriculture and animal resources development Board (RAB). The framework is summarized in a schematic diagram that presents the variables and their hypothesized relationship. It shows the relationship of the variables under study and helps to keep the research work focused on the objectives of the study.

The relationships between the independent and dependent variables are summarized in the Figure 1 below.



**Figure 1 The Conceptual Framework Independent Variables Dependent Variable**  
**Source: Researcher (2022).**

Indicators of Dependent Variable Indicators of project performance will be projects being completed effectively, with budget efficiency, within Project Beneficiaries satisfaction, impact of the project vis a vis Stakeholders and Project sustainability.

Monitoring and evaluation practices ensures that project/program results at the levels of impact, outcome, output, process along with input can be quantified so as to offer a framework for accountability and in assisting in making informed decisions at program and policy levels (Kihuha, 2012). Monitoring and evaluation are mostly important practices to any project stage, it allows for an ongoing review of the project performance. Several variables affect the project performance, these variables which follows the RBM theory includes: monitoring skills of the staff, technical activities, information system (use of technology), in addition to the management support acting as a mediate variable in the study.

## RESEARCH METHODOLOGY

This chapter outlines the various methodologies the researcher used in conducting the research, and covers different approaches such as research design, the sampling methods, instruments for data collection, the data collection procedure and methods for data analysis.

### Research Design

The researcher to specify methods and procedures for acquiring the needed information was a field-survey uses it. It uses both qualitative and quantitative approaches. The qualitative involved examining and reflecting on perceptions of the employees on M&E and success of projects. To make the research more rich and understandable, quantitative approach is used in forms of tables for statistical analysis, the primary data was directly collected from employees and managers of PLANTWISE Project using the questionnaire and interview, the secondary data was collected in different books, reports and internet in order to provide enough and adequate information about M&E and success of projects in Rwanda. The study was based on respondent's answers to draw a good conclusion and recommendations.

### Target Population

PLANTWISE operates in all 30 districts of Rwanda and its interventions in community development projects as Agriculture Development Project. The target population of this CABI founded Agriculture Development project is equal to 128 people working in Plantwise Project.

### Sample Size and sampling technique

The Sloven's formula was used to determine the sample size.

$$N$$

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

Where: n= required sample size N= Population (128) e= Standard error (0.1);

$$n = \frac{128}{1 + (128 \times 0.1^2)} = 56.14 = 56 \text{ Respondents}$$

**Table 1 Distribution of Respondents by Category and Managerial Position**

No Group category	Population	Sample size selected
Project Managers	5	2
Project Implementers	30	13
Project Beneficiaries	60	26
Project Stakeholders	33	15
TOTAL	128	56

The two people in the management position in accordance to PLANTWISE Project were targeted because of their leadership position. These include coordinators of programs coordination unit, the national coordinator and the executive secretary of PLANTWISE Project in the senior management. Also 13 people from Project Implementers comprised of Project staff and Technicians were targeted purposefully in this research. In addition, 26 people that Project beneficiaries working with PLANTWISE Project was formed a part of the sample size in all as well as 15 Person from the Project Stakeholder have been selected as respondent, a purposefully sampling method was used to get intended respondents. The researcher used the judgement about which respondents to choose and picked the respondents who fulfill the purpose of the study.

### Data Collection Tools

To analyze the effect of M&E activities on projects successful using a case study of PLANTWISE PROJECT, RAB in RWANDA Primary data was collected through the use of interviews and structured questionnaires. Secondary data was obtained from PLANTWISE Project, RAB and MINAGRI reports and other relevant documents related to the study. Printed questionnaires and interviews were given out to a sampled number of study respondents.

### Data Analysis

The tool of analysis that the researcher used is the SPSS which was helped to summarize the primary data into quantitative data and the researcher was given the proper interpretation of the results basing on research objectives and questions.

Below function represents the analysis model for the study.

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \epsilon$$

Y = Project success

$\alpha$  = constant

$b_1$ - $b_4$  = Regression Coefficient

$\epsilon$  = error term

$Cs=f(X_1, X_2, X_3, X_4)$

$X_1$  is Staff technical Skills

$X_2$  is Tools and techniques

$X_3$  is stakeholders' involvement and participation

$X_4$  is Technology use

## DATA INTERPRETATION, ANALYSIS AND DISCUSSION OF RESEARCH FINDINGS

The researcher showed the findings of the study as analyzed from primary data collected from the field using questionnaire. Methods of analysis used are summaries of tables and graphs showing the percentages and cumulative percentages generated using SPSS computer package. Data were coded and edited for completeness before being presented in form of frequency distribution tables. The findings were compiled and presented to provide analysis and interpretation of the research question.

### Descriptive statistics

The section below describe the responses from collected questionnaires based on four specific objectives of the study; determine the effect of Staff's technical skills on M&E on the Success of PLANTWISE Project in Rwanda Agriculture and Animal Resources Development Board, analyze the effect of M&E Tools and Techniques on the Success of PLANTWISE Project in RAB, assess effect of Stakeholders involvement in Monitoring and Evaluation on the success of PLANTWISE Project in RAB and find out the effect of information Technology use on the success of PLANTWISE Project in RAB.

**Table 2: Effect of Staff technical Skills on M&E on PLANTWISE Project Success**

	n=56	SA	A	N	D	SD	$\bar{x}$	$\sigma$
PLANTWISE Project provide M&E Course and I have attended the course	28	20	2	3	3		4.20	1.102
Level of skills in M&E of PLANTWISE Project is on appreciated level	50.0	35.7	3.6	5.4	5.4			
	22	24	6	2	2		4.11	.985
	39.3	42.9	10.7	3.6	3.6			



Staff skills in M&E had positive effect on success of PLANTWISE Project	26	15	10	3	2		
	46.4	26.8	17.9	5.4	3.6	4.07	1.093

Source: Field data, September 2022

The researcher would like to know the Respondents have been obtained M&E Courses or Trainings in Rwanda Agriculture and Animal Resources Development Board. The researcher found in table 2 that 50.0% of respondents agree, 35.7% agree, 3.6% were neutral, 5.4% disagree and strongly disagree that PLANTWISE Project provide M&E Course and I have attended the course, also a high mean of 4.20 is an evidence of the existence of the fact. Since the majority of the respondents were agreed that they have attended M&E courses in RAB, they gave relevant information in relation to M&E Skills and success of a project of an organization.

The researcher would like to know the level of skills of Respondents in M&E of the project in Rwanda Agriculture and Animal Resources Development Board. The researcher found that 39.3% strongly agree, 42.9% agree, 10.7% were neutral, 3.6% disagree and strongly disagree that level of skills in M&E of PLANTWISE Project is on appreciated level, also a high mean of 4.11 is an evidence of the existence of the fact. Since the majority of the respondents were agreed that they have sufficient skills in M&E of the Project in RAB, they gave relevant information in relation to M&E Skills and success of a project of an organization.

An interviewee stated that *"Knowledge is power, and the more employees know, the more project can grow. By providing technical skills training for employees, instilling self-confidence that they have the knowledge and competence to perform their daily tasks to the best of their ability"*.

The researcher was interested in knowing the effect of Staff skills in M&E on PLANTWISE Project Success that have been implemented RAB. The researcher found that 46.4% strongly agree, 26.8% agree, 17.9% were neutral, 17.9% were neutral, 5.4% disagree and 3.6% strongly disagree that Staff skills in M&E had positive effect on success of PLANTWISE Project, also a high mean of 4.07 is an evidence of the existence of the fact. Since the majority of the respondents were agreed that Staff skills in M&E had the effect on the success of PLANTWISE, they gave relevant information in relation to staff skills in M&E and success of Agriculture Development Project.

In agreement with Gorgens & Kusek (2010) stated that it is therefore necessary to have officials or consultants who are highly skilled in M&E in order to ensure effective practice of M&E. Understanding the skills required and the capacity of people involved in the M&E practices including addressing capacity gaps through structured capacity development programs is the heart of the M&E system.

**Table 3: Effect of Tools and techniques used in M&E on PLANTWISE Project Success**

	n=56	SA	A	N	D	SD	$\bar{x}$	$\sigma$
M&E Tools and Techniques use in PLANTWISE Project are adequate.	15	20	7	4	10			
	26.8	35.7	12.5	7.1	17.9	3.66	1.427	
M&E Tools and Techniques in PLANTWISE Project are well established.	16	15	9	4	12			
	28.6	26.8	16.1	7.1	21.4	3.54	1.505	
M&E Tools and Techniques had positive effect on success of PLANTWISE Project	17	19	7	6	7			
	30.4	33.9	12.5	10.7	12.5	3.69	1.359	

Source: Field data, September 2022

The results in Table 3 show that 26.8% strongly agree, 35.7% agree, 12.5% were neutral, 7.1% disagree and 10% strongly disagree that M&E Tools and Techniques use in PLANTWISE Project are adequate, also a high mean of 3.66 is an evidence of the existence of the fact. Basing on the data provided by respondents this indicates the M&E tools and techniques in PLANTWISE Project are adequate, also a high mean of 3.66 is an evidence of the existence of the fact.

The findings showed that 28.6% strongly agree, 26.8% agree, 16.1% were neutral, 7.1% disagree and 21.4% strongly disagree that M&E Tools and Techniques in PLANTWISE Project are well established, also a high mean of 3.54 is an evidence of the existence of the fact. Basing on the data provided by

the majority of respondents, this shows that PLANTWISE Project adopted the use of M&E Tools and Techniques are well established.

M&E Tools and Techniques are important to ensure smooth results. The researcher was interested in finding if the use of M&E Tools and Techniques had the effect on the success of PLANTWISE Project. The researcher found that consists of the total majority of respondents who were 30.4% strongly agreed and 33.9% disagree the point while, 10.7% of total respondents disagree and 12.5% strongly disagree, also a high mean of 3.69 is an evidence of the existence of the fact. Basing on the data provided by respondents, this approved that the Use of M&E Tools and Techniques had the effect on the success of PLANTWISE Project.

Not far for the study conducted by Dayson (2010) the importance of M&E technical activities was confirmed by defining monitoring as the collection along the analysis of information regarding a given program or intervention, while evaluation is an assessment whose focus is to answer the questions related to program or intervention. These general activities of M&E support keeping all the work on track and can let the management know whether things are not running as expected.

**Table 4: Effect of stakeholders involvement and participation on PLANTWISE Project Success**

	n=56	SA	A	N	D	SD	$\bar{x}$	$\sigma$
Stakeholders involvement is key in M&E of the Project	20	16	11	9	0		3.90	1.067
	35.7	28.6	19.6	16.1	0.0			
Donors, project implementers and beneficiaries mostly involved in M&E activities	25	12	6	9	4		3.66	1.103
	44.6	21.4	10.7	16.1	7.1			
Stakeholders involvement in M&E had the effect on Project success	12	23	12	3	6		3.57	1.204
	21.4	41.1	21.4	5.4	10.7			

Source: Field data, September 2022

The results in Table 4 show that 35.7% strongly agree, 28.6% agree, 19.6% were neutral, 16.1% disagree and none strongly disagree that Stakeholders involvement is key in M&E of the Project, also a high mean of 3.90 is an evidence of the existence of the fact. Basing on the data provided by respondents this indicates Stakeholders are participated in M&E of PLANTWISE Project.

Stakeholder Involvement directly and indirectly affected by project is critical to its success. From the findings show that 44.6% strongly agree, 21.4% agree, 10.7% were neutral, 16.1% disagree and 7.1% strongly disagree that donors, project implementers and beneficiaries mostly involved in M&E activities, also a high mean of 3.66 is an evidence of the existence of the fact. Since the majority of respondents were confirmed that the stakeholders were involved in the process of M&E therefore, participation and involvement of a broader range of stakeholders in M&E is critical to develop a successful M&E System from the design stage to the implementation and enables a better use of M&E conclusions, recommendations and lessons.

One of staff said that “ *Engaging with stakeholders ultimately save time and money. Data shows that project who engage stakeholders improve their chances of finishing a project on time and on budget. That savings can come from the elimination of roadblocks, and the mitigation of surprises that can slow project process*”.

The findings showed that 21.4% strongly agree, 41.1% agree, 21.4% were neutral, 5.4% disagree and 10.7% strongly disagree that stakeholders involvement in M&E had the effect on Project success, also a high mean of 3.57 is an evidence of the existence of the fact. Basing on the data provided by the majority of respondents, this shows that PLANTWISE Project adopted stakeholder’s involvement to ensure the success of the project.

In line with Okun (2009) in his study on factors that influence the performance of donor funded projects concluded that the key factors that were found to affect the sustainability of donor funded projects were donor policies and the management system adopted by the implementing organization, existing financial systems, technology adopted, participation and involvement of stakeholders and the target beneficiaries.

**Table 5: Effect of Technology use on the success of PLANTWISE Project**

	n=56	SA	A	N	D	SD	$\bar{x}$	$\sigma$
There is use of information technology in M&E in Plantwise Project	16	22	8	9	1		3.77	1.095
	28.6	39.3	14.3	16.1	1.8			
The use Information technology in M&E improved the effectiveness and efficiency	13	20	7	9	7		3.66	1.276
	23.2	35.7	12.5	16.1	12.5			
The use Information technology in M&E contributed on Plantwise Project success	17	26	9	4	0		3.71	1.124
	30.3	46.4	16.1	7.1	0.0			

Source: Field data, September 2022

The results in Table 5 show that 28.6% strongly agree, 39.3% agree, 14.3% were neutral, 16.1% disagree and 1.8% strongly disagree that there is use of information technology in M&E in Plantwise Project, also a high mean of 3.77 is an evidence of the existence of the fact. Basing on the data provided by respondents this indicates the use of information technology in M&E in Plantwise Project.

Information technology M&E are important to ensure smooth results. The researcher was interested in finding if the use Information technology in M&E improved the effectiveness and efficiency. The researcher found that 23.2% strongly agree, 35.7% agree, 12.5% were neutral, 16.1% disagree and 12.5% strongly disagree that the use Information technology in M&E improved the effectiveness and efficiency, also a high mean of 3.66 is an evidence of the existence of the fact. Basing on the data provided by respondents; this approved that the Use of Information technology in M&E had improved the effectiveness and efficiency.

The findings of Table 4.9 showed that that 30.3% strongly agree, 46.4% agree, 16.1% were neutral, 7.1% disagree and none strongly disagree that the use Information technology in M&E contributed on Plantwise Project success, also a high mean of 4.21 is an evidence of the existence of the fact. Basing on the data provided by the majority of respondents, this shows that PLANTWISE Project adopted the use of information and technology in M&E Tools and Techniques for the success of the project. In complement with Technopedia (2013) stated the starting point for analysis in a project is to have arranged set of data, thus the concept of information system as an M&E activity.

### Inferential statistics

The section below described inferential statistics including test of normality, correlation and regression tests used to test the hypotheses of the study.

**Table 6: Correlation matrix**

		Staff technical Skills	Tools and techniques	Stakeholders involvement and participation	Technology use	Project success
Staff technical Skills	Pearson Correlation	1	.651**	.671**	.426**	.669**
	Sig. (2-tailed)		.000	.000	.001	.000
	N	56	56	56	56	56
Tools and techniques	Pearson Correlation	.651**	1	.727**	.700**	.686**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	56	56	56	56	56
Stakeholders involvement and participation	Pearson Correlation	.671**	.727**	1	.607**	.663**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	56	56	56	56	56
Technology use	Pearson Correlation	.426**	.700**	.607**	1	.658**
	Sig. (2-tailed)	.001	.000	.000		.000
	N	56	56	56	56	56
Project success	Pearson Correlation	.669**	.686**	.663**	.658**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

N	56	56	56	56	56
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Source: Field data, September 2022

Table 6 shows the correlation between variables under the study. The results indicated  $p < 0.05$  with a Pearson correlation coefficient of 0.7.669. This indicates that Staff technical Skills in monitoring and evaluation has significant relationship with project success of PLANTWISE project in RAB. Correlation results indicate a probability value of 0.000 that is less than significant level (0.05) and a Pearson coefficient of 0.686 indicating that Monitoring and Evaluation Tools and Techniques has significant relationship with success of PLANTWISE project in RAB. The results indicated  $p < 0.05$  with a Pearson correlation coefficient of 0.663. This indicates that stakeholders' involvement and participation has significant relationship with the Success of PLANTWISE project in RAB. Table 4.12 shows the correlation between variables under the study. The results indicated  $p = 0.000 < 0.05$  with a Pearson correlation coefficient of 0.658. This indicates that Technology use in monitoring and evaluation has significant relationship with the Success of PLANTWISE project in RAB.

**Table 7: Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796 <sup>a</sup>	.633	.604	8.75017

a. Predictors: (Constant), Technology use, Staff technical Skills, stakeholders involvement and participation, Tools and techniques

Source: Field data, September 2022

The results in Table 7 indicate model summary on Technology use, Staff technical Skills, stakeholders involvement and participation, Tools and techniques in M&E and project success. The value of R was 0.796, the R Square was 0.633, and the adjusted R Square of 0.604 means that Success of PLANTWISE project in RAB at 63.3%.

**Table 8: ANOVA**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6732.001	4	1683.000	21.981	.000 <sup>b</sup>
	Residual	3904.838	51	76.565		
	Total	10636.839	55			

a. Dependent Variable: Project success

b. Predictors: (Constant), Technology use, Staff technical Skills, stakeholders involvement and participation, Tools and techniques

Source: Field data, September 2022

Findings in Table 8 show analysis of variance between independent variable and dependent variable whereby  $F = 21.981$  and  $p$  value of  $0.000 < 0.05$  which is significance level indicates that regression was significant as technology use, Staff technical Skills, stakeholders involvement and participation, Tools and techniques in M&E and project success of PLANTWISE project in RAB.

**Table 9: Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-8.888	5.738		-1.549	.128
	Staff technical Skills	1.458	.493	.361	2.956	.005
	Tools and techniques	.374	.474	.118	.788	.043
	Stakeholders involvement and participation	.424	.462	.126	.917	.036
	Technology use	1.361	.484	.345	2.813	.007

a. Dependent Variable: Project success

Source: Field data, September 2022

Below function represents the analysis model for the study.

$$Y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + \epsilon$$

Y = Project success

$\alpha$  = constant

$b_1$ - $b_4$  = Regression Coefficient

$\epsilon$  = error term

$Cs=f(X_1, X_2, X_3, X_4)$

$X_1$  is Staff technical Skills

$X_2$  is Tools and techniques

$X_3$  is stakeholders' involvement and participation

$X_4$  is Technology use

Table 9 on regression equation shows that Project success will always depend on a constant factor of -8.888 regardless of the existence of other determinants. The other variables explain that; every unit increase in Staff technical Skills will increase project success of PLANTWISE project in RAB by a factor of 1.458. Every unit increase in Tools and techniques will increase project success of PLANTWISE project in RAB by a factor of .374. Every unit increase in Stakeholders involvement and participation will increase project success of PLANTWISE project in RAB by a factor of .424. Every unit increase in Technology use will increase project success of PLANTWISE project in RAB by a factor of 1.361.

It showed that Staff technical Skills  $p=.005$ , Tools and techniques  $p=.043$ , stakeholders' involvement and participation  $p.036$  and Technology use  $p=.007$  means that ( $p<0.05$ ) for all variables. Hereby, researcher rejected the hypothesis  $H_{01}$ : Staff technical Skills in monitoring and evaluation has no significant effect on project success of PLANTWISE project in RAB.

Researcher rejected the hypothesis  $H_{02}$ : Monitoring and Evaluation Tools and Techniques has no significant effect on the success of PLANTWISE project in RAB. Researcher rejected the hypothesis  $H_{03}$ : stakeholders' involvement and participation has no significant effect on the Success of PLANTWISE project in RAB. Researcher rejected the hypothesis  $H_{04}$ : Technology use in monitoring and evaluation has no significant effect on the Success of PLANTWISE project in RAB.

## CONCLUSION

Based on research general objective of analyzing the effects of M&E on the success of PLANTWISE project implemented by RAB, The results shown that there is positive effect of M&E on the Success of PLANTWISE Project. It was revealed that Monitoring and Evaluation (M&E) with Staff skills in M&E, M&E Tools and Techniques use, Stakeholder Involvement in M&E and Technology use in M&E are good predictors on the success of PLANTWISE project in RAB.

## Recommendation of the study

After successful completion of the study on M&E and success of projects, the researcher recommends the following to address some of the issues as highlighted in this research. First and for most important, it is imperative that RAB starts or involves income generating activities for reducing the dependence on the donor's fund. Second, much as there are a lot of resources being invested in project activities implementation, there is need for RAB (project activities implementer) to collocate more resources on M&E activities, so that the progress on implementation can be timely monitored and the impact measured upon completion of project activities. Third, there is need for training in this aspect of M&E. Fourth and lastly, there is need for RAB as project activities implementing organization to involve the stakeholders in the design and planning of the projects to facilitate M&E.

## Suggestion for further research

The research study was limited in analyzing M&E and success of the projects. Since M&E of projects are to be an integral parts of the whole project life cycle, further research should be carried out in order to investigate on the project design and planning practices of the local government.

Secondary, upcoming research should also try to assess the challenges faced by local government project monitoring and evaluation. Lastly, upcoming research should also try to assess the effectiveness of M&E practices on projects implemented by local NGOs.

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