















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		4.11	.985
	22	24	6	2	2			
	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
The use Information technology in M&E improved the effectiveness and efficiency	13	20	7	9	7		3.66	1.276
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

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

$X_1$  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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