



# Effect of Stakeholder’s Management Practices on the Success of Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda

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**Abstract:** *This paper investigates the impact of stakeholder communication management on the success of the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda. The study employed a descriptive and correlational research design, combining both quantitative and qualitative methods. The target population consisted of 8,521 individuals directly involved in the project, including farmers, cooperative stakeholders, agri-business entrepreneurs, project staff, and government officials. A total of 381 respondents were sampled, and 9 key informants were interviewed. A total of 324 questionnaires were returned, and qualitative data was gathered through semi-structured interviews. Inferential analysis was conducted using SPSS software version 21. The findings revealed a strong positive correlation between stakeholder communication management and project success, with a Pearson correlation coefficient of  $r = 0.744$ , indicating that effective communication practices are critical to project outcomes. Multiple regression analysis further confirmed that communication management significantly predicts project success, with a standardized beta coefficient of 0.144. The  $p$ -value of 0.000 indicates the statistical significance of this relationship. Despite these positive findings, challenges such as inadequate communication channels and delays in information dissemination were identified, which hindered project success. Based on these findings, the study recommends enhancing communication channels, improving the timeliness and accuracy of information delivery, and tailoring communication strategies to meet the specific needs of different stakeholder groups. These measures are expected to strengthen stakeholder engagement and improve the overall success of the SAPMP.*

**Keywords:** *Stakeholder communication, Project success, Sustainable Agriculture Productivity and Market Linkage Project, Gisagara District, Rwanda.*

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## 1. Introduction

Stakeholder management practices are essential for the success of agricultural projects, facilitating collaboration, communication, and the alignment of diverse interests (Adams & Kim, 2023). Effective engagement involves

identifying key players, understanding their needs, and fostering inclusive decision-making processes. In agriculture, where multiple stakeholders such as farmers, government agencies, NGOs, and private sector actors intersect, managing these relationships is crucial for sustainable outcomes (Patel & Ndlovu, 2021). The

complexities of agriculture require that all voices be heard, ensuring projects are designed with a comprehensive understanding of local contexts and challenges (Zhang & Mwangi, 2022).

Globally, the importance of stakeholder management in agriculture is evident across various countries (Smith & O'Brien, 2022). In developed nations such as the United States, Canada, and the Netherlands, stakeholder engagement has been pivotal in driving agricultural innovation and sustainability. In the U.S., collaboration between farmers and research institutions has led to advanced technologies and practices, resulting in increased yields and reduced environmental impact (Johnson & Vermeer, 2024). Similarly, in Canada, initiatives involving Indigenous communities in decision-making have improved resource management and sustainability (Lee & Patel, 2023). The Netherlands is noted for its strong public-private partnerships that foster a robust agri-food sector, excelling in sustainability and efficiency (Koster & Berg, 2020).

In developed countries, stakeholder management practices have become integral to enhancing agricultural productivity (Wilson & Nguyen, 2024). For instance, the U.S. Precision Agriculture movement relies on collaboration between farmers, technology companies, and research institutions to optimize resource use (Thompson & Adams, 2023). Canada effectively engages Indigenous communities in decision-making, resulting in better land management practices (Garcia & Wilson, 2022). In the Netherlands, public-private partnerships have spurred innovation in sustainable farming, establishing the country as a leader in agri-tech solutions (Hendriks & Taylor, 2023). These examples illustrate how developed nations leverage collaboration to tackle complex agricultural challenges (Olsen & Rojas, 2024).

In Africa, stakeholder dynamics are critical due to diverse socio-economic landscapes and pressing agricultural challenges (Kariuki & Naidoo, 2021). Countries like Kenya, Nigeria, and Mozambique face significant food security and climate issues. In Kenya, local community engagement has effectively adapted agricultural practices to changing conditions, such as droughts (Ochieng & Moyo, 2022). In Nigeria, collaboration between farmers and NGOs has improved access to resources and markets, helping smallholders increase productivity and income (Adebayo & Anyanwu, 2023). Mozambique, too, faces similar challenges, where stakeholder dynamics play a crucial role in addressing issues such as food insecurity, climate change, and infrastructure limitations. In Mozambique, local farmer organizations, government bodies, and NGOs have worked together to improve agricultural practices, enhance market access, and promote resilience to climate variability (Fernando & João, 2022).

The collaboration among these stakeholders has helped improve the agricultural capacity of smallholder farmers, especially in rural areas, where infrastructure and access to resources are often limited (António & Teresa, 2020). These initiatives are vital for strengthening food systems and boosting the resilience of Mozambique's agricultural sector in the face of external challenges.

In East Africa, countries like Tanzania and Uganda face complex challenges in agricultural productivity, exacerbated by climate change and population growth. Issues such as unpredictable rainfall, soil degradation, and limited access to modern agricultural technologies have hindered progress in both nations, impacting their ability to meet food demands and ensure sustainability (Munga & Chaka, 2023). However, collaborative efforts through multi-stakeholder platforms have begun to address these challenges by fostering dialogue among farmers, policymakers, researchers, and civil society organizations. These platforms have facilitated the exchange of knowledge and resources, enabling innovative solutions for sustainable farming practices (Juma & Khamala, 2022). A prime example is Tanzania's "Sustainable Agriculture Initiative," which promotes best practices like crop diversification and soil conservation, helping to improve food security and empower local communities (Okwu & Kamau, 2024).

In Rwanda, the government prioritizes stakeholder management to modernize the agricultural sector (Nyandwi & Gicuku, 2022). Programs like the "Crop Intensification Program" emphasize collaboration among farmers, cooperatives, and government entities, resulting in increased yields and better market access. This participatory approach ensures farmers are active contributors to agricultural policy-making (Kagabo & Ruzindana, 2023). Such inclusive practices demonstrate how effective engagement can lead to significant advancements in productivity and community well-being, positioning Rwanda as a leader in agricultural innovation in East Africa (Mugenzi & Nyamasyo, 2024). This context is particularly relevant to the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, which aims to enhance productivity and ensure robust market access for local farmers. By promoting sustainable farming practices, SAPMP seeks to improve yields and resilience to climate change. Through capacity building, establishing cooperatives, and fostering partnerships with local markets, SAPMP endeavors to empower farmers, increase their income, and enhance food security, contributing to long-term sustainability in the region.

## 1.1 Problem Statement

Stakeholder management practices are crucial to the success and sustainability of agricultural projects, directly influencing project outcomes by engaging various stakeholders such as farmers, government agencies, NGOs, and private sector actors (Adams & Kim, 2023; Patel & Ndlovu, 2021). Effective stakeholder management ensures inclusive participation, which increases project relevance, fosters commitment, and enhances overall project effectiveness. Without this, projects may suffer from issues like poor resource allocation, miscommunication, and eventual failure (Zhang & Mwangi, 2022). Existing literature highlights the importance of stakeholder engagement, with studies like Muna & Juma (2021) in Kenya and Tambo & Mkwambisi (2019) in Malawi showing how strong stakeholder involvement leads to higher success rates in achieving goals like food security and sustainable farming practices.

However, despite growing research on the significance of stakeholder management, gaps remain, particularly regarding its impact on the sustainability of the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda. Research on stakeholder collaboration in Rwanda's agricultural projects is limited, and studies such as Hirwa et al. (2021) and Ntakirutimana (2019) indicate challenges like poor infrastructure, gaps in national coordination, and limited community participation, which hinder project outcomes. Additionally, the importance of aligning local and national strategies for agricultural development is highlighted by Munyakazi (2020) and others. This points to the need for deeper insights into how local and national stakeholders can collaborate more effectively to enhance agricultural productivity and market linkages in Rwanda.

The SAPMP aims to tackle critical issues in Gisagara District, such as low agricultural productivity, limited market access, and inadequate value chains that hinder economic growth. By engaging stakeholders effectively, the project seeks to empower farmers, improve market linkages, and build resilient agricultural systems. However, persistent challenges, such as poverty among rural farming households and inefficient market systems, continue to hinder success. This study aims to fill the gap in the literature by examining how stakeholder management practices impact agricultural productivity and market linkages in the SAPMP. It provided insights into how effective stakeholder collaboration can improve agricultural outcomes and economic resilience for farmers in Gisagara District.

This study sought to achieve the following research objective:

To investigate the effect of stakeholders' communication management on the success of the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP)

## 2.1 Literature Review

Stakeholder management practices are integral to the success of projects, particularly in agricultural development initiatives like the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP). Freeman (2021) defines stakeholder management as the process of identifying, understanding, and addressing the needs and expectations of those who have an interest in or are affected by a project. In the context of SAPMP, stakeholders include local farmers, government entities, NGOs, and private sector actors, each with unique needs that must be managed strategically to ensure project success. Failure to properly manage stakeholder relationships can lead to dissatisfaction, project delays, or even failure (Mitchell et al., 2020).

Effective stakeholder management involves a series of practices, including stakeholder identification, communication, conflict management, and participation. According to the Project Management Institute (2023), stakeholder identification is the first step in recognizing the key individuals or groups whose interests and actions affect the project. After identification, maintaining effective communication is crucial. This involves sharing timely and relevant information and creating avenues for feedback, which enhances transparency and trust among stakeholders. Recent studies highlight that clear, consistent communication between stakeholders in agricultural projects helps in overcoming barriers to participation and fosters a cooperative environment (Anna et al., 2021).

### 2.1.1 Stakeholders' Communication Management Practices

Effective communication management is crucial for the success of any project, particularly in complex agricultural initiatives like the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP). Communication between project stakeholders ensures that all parties are well-informed, aligned with project goals, and able to provide timely feedback. According to Liu et al. (2021), communication management involves the creation of clear and transparent communication channels between stakeholders, ensuring that information flows freely in both directions. In the case of SAPMP, these stakeholders include farmers, local communities, government agencies, NGOs, and private sector entities, all of whom must be kept informed and engaged throughout the project cycle.

A key component of stakeholder communication management is the establishment of appropriate communication methods. Communication strategies should be tailored to the preferences and capabilities of the

stakeholders. For example, farmers may benefit from face-to-face meetings, community workshops, or mobile-based communication platforms, while government officials might require formal reports and emails (Agyemang et al., 2022). As stated by Zhang and Shen (2023), adapting communication methods to the needs of different stakeholder groups increases the likelihood of effective message transmission and reduces the risk of misunderstandings. Effective communication also facilitates stakeholder engagement, helping to build trust and promote cooperation among diverse groups, which is essential for the long-term success of agricultural projects.

### **2.1.2 Project Success**

Project success is a multifaceted concept that extends beyond simply meeting the objectives outlined at the outset. Traditional measures of success often focus on whether a project is completed on time, within budget, and according to scope. However, these elements alone do not fully capture the complexity of a successful project. According to the Project Management Institute (PMI, 2021), a project is considered successful when it satisfies its intended objectives and meets the expectations of all stakeholders, including clients, team members, and other involved parties. This perspective emphasizes that project success must encompass both the specific deliverables and the broader impact on stakeholders, ensuring that expectations are aligned, communicated, and met throughout the project's lifecycle. As Meredith and Mantel (2017) suggest, successful projects are those where stakeholder satisfaction is consistently high, and project goals are fully realized.

In the context of agricultural development projects like SAPMP, stakeholder satisfaction plays a significant role in determining the overall success of a project. As Turner et al. (2021) note, engaging stakeholders throughout the project lifecycle and aligning the project with their needs and expectations is crucial for ensuring that the project delivers value and is seen as successful by all involved parties. This is especially relevant in agriculture, where stakeholders such as farmers, government agencies, and local communities often have different interests and priorities. Successful stakeholder engagement, through practices like clear communication, addressing needs, and conflict resolution, increases the likelihood that the project will be positively received and sustainable in the long run (Meyer & Bocken, 2022).

## **2.2 Theoretical Review**

Theoretical frameworks provide a foundation for understanding and analyzing the relationship between stakeholder management practices and the success of projects. In this section, Relational Communication

Management Theory is discussed in relation to the specific objectives of this study focusing on a different aspect of stakeholder management practices within the context of the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda

The foundational ideas of Communication Management Theory can be traced back to the work of Julia T. Wood, whose 1990 model of communication emphasized the importance of clear and efficient message transmission. Their model, which initially focused on the technical process of transmitting information from a sender to a receiver, laid the groundwork for understanding communication as a critical element in organizational success (Oliver, 2021). Over time, the theory evolved to incorporate the dynamics of organizational communication, with scholars like Bormann (2024) further refining the concept by highlighting the interactive and continuous nature of communication. This evolution of thought has made Communication Management Theory a vital part of understanding how communication impacts organizational effectiveness in both corporate and development settings.

Relational Communication Theory underscores the importance of communication in building and sustaining relationships within an organization or project. Rather than being a one-way flow of information, communication is seen as a two-way, ongoing process that involves both the transmission of messages and the active engagement of stakeholders through feedback (Bauman, 2024). The theory emphasizes that effective communication requires understanding the relational needs of the target audience, selecting the appropriate communication methods, and ensuring that feedback loops are actively incorporated to adjust strategies as needed. In development projects, such as those in agricultural contexts, the theory is particularly relevant as it highlights how communication practices can influence how stakeholders—such as farmers, government agencies, and NGOs understand the project's objectives and challenges, and how their interactions and relationships influence project success.

Relational Communication Theory is highly relevant to the second objective of this study, which examines how stakeholders' communication practices impact the success of the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District. Effective communication plays a critical role in fostering positive relationships among stakeholders, ensuring that everyone farmers, local communities, government agencies, and NGOs—are well-informed about the project's goals and processes. Clear and consistent communication helps to align expectations, prevent misunderstandings, and resolve conflicts, all of which are essential for building trust and

ensuring project success (Meyer & Bocken, 2022). This study applies Relational Communication Theory to evaluate how SAPMP has communicated with its stakeholders, the relational strategies used to ensure message clarity, and how these communication practices have influenced the project's overall effectiveness. By exploring the relational communication dynamics in SAPMP, the study offers insights into best practices for managing communication in agricultural development projects, with an emphasis on relationship-building, trust, and stakeholder engagement.

## 2.3 Empirical Literature

The empirical review provides an analysis of previous research findings that are relevant to the stakeholder management practices and project success, specifically focusing on agricultural development projects and how these practices influence project outcomes. The review is categorized based on the objective of this study. This section evaluates previous studies, highlighting their findings and relevance to the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda.

### 2.3.1 Stakeholders 'Communication Management Practices and Project Success

Globally, the role of communication management in ensuring the success of projects is widely recognized. A study by Johnson et al. (2020) in the United Kingdom highlighted that 50% of projects that had effective communication strategies reported significant improvements in performance and stakeholder satisfaction. The study employed a structural equation model (SEM) and found that the communication management coefficient was 0.70, which had a direct positive effect on project success. The study concluded that regular communication with stakeholders during all stages of the project ensured alignment with project goals, facilitated timely issue resolution, and built stakeholder trust. However, the research gap identified in this study is the insufficient examination of the impact of communication mediums on stakeholder engagement, which could provide deeper insights into which forms of communication (e.g., digital vs. face-to-face) are most effective in different contexts.

In Africa, effective communication management has been shown to be a significant factor in improving the success of development projects. Koffi et al. (2021) conducted a

study in Ghana and found that agricultural projects that employed structured communication strategies had a 60% higher success rate than those that lacked such strategies. Using multiple regression analysis, the study found that the communication management practices had a coefficient of 0.62, indicating that projects that provided timely and transparent updates to stakeholders were better able to align expectations and maintain support throughout the project lifecycle. The research also highlighted a gap in understanding the communication needs of rural farmers and how these needs may vary across different regions in Africa. Further research could investigate how to tailor communication strategies to suit the unique challenges faced by rural stakeholders in the continent's agricultural projects. In East Africa, particularly in Tanzania and Uganda, a study by Mwakapwa et al. (2022) on agricultural development projects found that 80% of successful projects had clear communication channels established with stakeholders from the beginning. The study used path analysis and found a significant path coefficient of 0.68 for the relationship between communication management and project success. The study emphasized that communication was not only essential for managing stakeholder expectations but also for addressing conflicts and keeping all parties informed of progress. Despite these findings, the study did not consider the impact of language barriers and literacy levels, which may affect how stakeholders in East Africa receive and process communication. This creates a research gap that could be addressed by focusing on communication strategies that account for regional linguistic and educational differences. In Rwanda, the research conducted has shown that effective communication management is essential for agricultural development projects to succeed. Ntakirutimana et al. (2024) found that projects that prioritized communication had an 85% success rate in achieving project objectives, compared to 60% for those that did not. Using logistic regression, the study showed that the communication management coefficient was 0.74, underscoring the importance of clear and regular communication with all project stakeholders. The study highlighted the need for ongoing engagement with farmers, local authorities, and other stakeholders to maintain alignment and resolve issues as they arise. However, the study identified a gap in the research regarding the role of digital communication tools and their effectiveness in rural areas, suggesting that future research should explore how technology can be leveraged to improve communication in agricultural projects in Rwanda.

Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda. A descriptive design was used to analyze the current state of the project without manipulating variables, helping to identify the factors influencing agricultural productivity, market linkage, and overall project performance. Additionally, a correlational

## 3. Methodology

The research employed a descriptive and correlational research design to explore the Sustainable Agriculture

design was applied to assess the relationship between stakeholder management practices and the project's success. This approach allowed for a comprehensive analysis of the various variables affecting the project (Calmorin & Calmorin, 2018).

The target population consisted of 8,521 individuals directly involved in the SAPMP, including farmers, project staff, SPIU staff, local authorities, traders, cooperative stakeholders, and agri-business entrepreneurs. Stratified random sampling was utilized to ensure representation from each subgroup, with a sample size of 381 respondents determined using Yamane's formula (Yamane, 1973). The formula used to calculate the sample size is:

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

Where:

n = sample size

N = the population size

e = the acceptable sampling error (5%) at 95% confidence level

Thus;

Substituting the values into the formula:

$$n = \frac{8521}{1 + 8521(0.05)^2}$$

$$n = \frac{8521}{1 + 8521(0.0025)}$$

$$n = \frac{8521}{1 + 21.3025}$$

$$n = \frac{8521}{22.3025}$$

$$n = 381.38 \approx 381$$

A total number of 381 respondents made a sample size. This sample included 320 farmers, agricultural producers (320), followed by cooperative stakeholders (49), traders (6), agri-business entrepreneurs (3), and smaller representations from 1 project team member, 1 SPIU staff, and 1 local government authorities.

Data collection combined both primary and secondary methods. Primary data was gathered through questionnaires and semi-structured interviews. Questionnaires provided quantitative data through Likert-scale and closed-ended questions, while interviews allowed for in-depth qualitative insights from key stakeholders like project staff, government authorities, and traders. Secondary data, including project reports, policy

documents, and previous research, was also reviewed to supplement primary data and provide contextual understanding (Patten, 2020).

The instruments used for data collection were piloted to test their clarity and relevance. A pilot study with 38 participants, who were not sampled from the research participating population, provided feedback that was used to refine the questionnaires and interview guides. Content validity was assessed through expert reviews, and a Content Validity Index (CVI) of 0.92 confirmed the adequacy of the instruments (Mugenda & Mugenda, 2003). Reliability was tested using Cronbach's alpha, which yielded a satisfactory coefficient of 0.869, indicating good internal consistency of the questionnaire items (Gally, 2019).

For data analysis, both descriptive and inferential statistical methods were used. Descriptive statistics summarized the data, while regression analysis was employed to assess the relationships between stakeholder management practices and project success. A multiple regression model was used to calculate the impact of variables like stakeholder needs, communication, conflict management, and participation on project performance. Additionally, qualitative data from interviews was analyzed through thematic analysis to uncover key patterns and insights related to the project's success

Ethical considerations were crucial in this study, ensuring that participants' rights and well-being were respected. Informed consent was obtained, and participants were assured of their right to withdraw from the study at any time. Confidentiality was maintained by anonymizing data, and all findings were reported in aggregate form. The study adhered to principles of non-maleficence, ensuring that no harm came to participants, and upheld transparency and integrity throughout the research process.

## 4. Results and Discussion

### 4.1 Findings

This section presents the analysis and interpretation of the findings of the study in relation to the research hypothesis.

#### 4.1.1 Response Rate

The study targeted 8,521 individuals and sampled 381 respondents, with 372 questionnaires distributed to cooperative stakeholders, agri-business entrepreneurs, farmers, and agricultural producers, representing 97.6% of the sample. Of the 372 distributed, 324 questionnaires were returned, yielding an 87.1% return rate, while 48 were not

returned (12.9%). Additionally, 9 individuals were selected for interviews, representing 2.4% of the sample. This included 1 project manager, 1 SPIU staff member, 1 government official, and 6 traders. With the inclusion of the interviews, the total number of responses reached 333, resulting in an overall response rate of 87.4%. This high participation rate ensures the findings are reliable and representative of the target population.

### 3.1.2 Descriptive Statistics of Stakeholders' Communication Management

**Table 1: Level of agreement of Stakeholders 'communication management**

<b>Views of respondents</b>	<b>N</b>	<b>M</b>	<b>SD</b>
Frequent communication between stakeholders is essential for the successful resolution of conflicts in the project.	324	4.39	.854
Timely delivery of information to stakeholders helps prevent conflicts and ensures smooth project execution.	324	4.55	.725
The communication channels used in the project are effective in resolving conflicts and contributing to project success.	324	1.23	.477
Regular communication between project team members and stakeholders reduces misunderstandings that may hinder project progress.	324	4.31	.854
The speed and accuracy of information delivery play a critical role in minimizing stakeholder conflicts.	324	4.40	.897
Valid N (listwise)	324		

**Source :** Field Data, 2025-**Key :** **M**=Mean, **SD**=Standard Deviation

Table 1 presents the perceptions of respondents regarding stakeholders' communication management within the SAPMP in Gisagara District. The responses were measured using a 1-5 Likert scale, where 5 indicates Strongly Agree (SA), 4 indicates Agree (A), 3 represents Neutral (N), 2 indicates Disagree (D), and 1 indicates Strongly Disagree (SD). This analysis offers valuable insights into the effectiveness of communication practices and their role in influencing the project's success and managing stakeholder relationships.

The statement, "Frequent communication between stakeholders is essential for the successful resolution of conflicts in the project," received a mean score of 4.39 with a standard deviation of 0.854. This indicates strong agreement among respondents that regular communication is crucial for resolving conflicts. The relatively higher standard deviation points to some variation in responses, suggesting that while most respondents recognized the importance of frequent communication, there may have been differences in how frequently they experienced or perceived this communication during the project. Nonetheless, the overall finding emphasizes the importance of maintaining open and consistent communication channels between stakeholders, as it is perceived to be a key factor in addressing conflicts efficiently and fostering a collaborative atmosphere. This is especially significant in a project like SAPMP, where

Table 1 presents the perceptions of respondents regarding stakeholders' communication management within the SAPMP in Gisagara District. A scale of 1-5 was used to express the opinions of respondents, where 5 = Strongly Agree (SA), 4 = Agree (A), 3 = Neutral (N), 2 = Disagree (D), and 1 = Strongly Disagree (SD). This analysis provides insight into how effective communication management practices are perceived to influence the project's success and stakeholder relationships.

multiple stakeholders with varying interests and perspectives are involved.

The statement, "Timely delivery of information to stakeholders helps prevent conflicts and ensures smooth project execution," received the highest mean score of 4.55 with a standard deviation of 0.725. This result reflects a strong consensus among respondents on the importance of timely communication. The relatively low standard deviation indicates that there was broad agreement that delivering information promptly plays a significant role in preventing misunderstandings, which could otherwise lead to conflicts or delays in the project. Timely communication is essential in ensuring that stakeholders are kept informed about project developments, which can help align expectations and prevent issues from escalating. This finding suggests that stakeholders in the SAPMP appreciate clear and prompt communication, which is crucial for smooth project execution and the achievement of project goals. It further implies that efforts to improve the speed of information sharing could enhance the overall project management process.

However, the statement, "The communication channels used in the project are effective in resolving conflicts and contributing to project success," received a very low mean score of 1.23 with a standard deviation of 0.477. This finding is concerning, as it suggests widespread dissatisfaction with the communication channels employed

in the project. Respondents did not perceive the communication methods as effective in either resolving conflicts or contributing to the overall success of the project. The low standard deviation indicates that the dissatisfaction was consistent among respondents, pointing to a fundamental issue with how communication channels were structured or utilized. This could suggest that stakeholders felt that the channels available to them were either inadequate, inefficient, or not appropriately tailored to the needs of the project. Effective communication channels are essential for ensuring that information flows smoothly and that conflicts are resolved in a timely and transparent manner.

The statement, "Regular communication between project team members and stakeholders reduces misunderstandings that may hinder project progress," achieved a mean score of 4.31 with a standard deviation of 0.854. This result indicates strong agreement that regular communication plays a vital role in reducing misunderstandings, which could otherwise slow down or hinder project progress. While the finding reflects a generally positive perception, the relatively higher standard deviation suggests that there may have been some variation in how regular communication was experienced by different stakeholders. It is possible that some stakeholders felt more regularly informed or involved than others, which could explain the variation in responses. However, the overall message is clear: regular communication between the project team and stakeholders is crucial for minimizing confusion and keeping the project on track

Finally, the statement, "The speed and accuracy of information delivery play a critical role in minimizing stakeholder conflicts," scored a mean of 4.40 with a standard deviation of 0.897. This result emphasizes the importance of delivering both fast and accurate information to stakeholders in minimizing conflicts. The relatively high standard deviation suggests that, while most respondents agreed on the significance of speed and accuracy, there was some variability in how this was perceived across different stakeholder groups. Some stakeholders may have experienced delays or inaccuracies in information delivery, which could have led to frustration or confusion. Nevertheless, the overall finding underscores that the effectiveness of communication depends not only on timeliness but also on the correctness of the information shared. Speed without accuracy can lead to misunderstandings, while accurate information delivered too slowly can also create dissatisfaction and conflict. The balance between speed and accuracy is therefore crucial for maintaining stakeholder trust and minimizing conflicts.

### 4.1.3 Test of Results

This section presents the results of the statistical tests conducted to evaluate the relationships between the variables under study. The findings from these tests determined whether the observed data support the research hypotheses or not.

**Table 2: Test of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
The project was completed on time, according to the planned schedule.	.338	324	.000	.735	324	.000
The project was completed within the allocated budget.	.348	324	.000	.676	324	.000
The project achieved its stated goals and objectives successfully.	.359	324	.000	.664	324	.000
The outcomes of the project are sustainable and will continue to benefit stakeholders in the long term.	.284	324	.000	.687	324	.000
Stakeholders are satisfied with the overall outcomes and achievements of the project.	.391	324	.000	.683	324	.000
Project success	.157	324	.000	.912	324	.000

a. Lilliefors Significance Correction

The results from the Kolmogorov-Smirnov and Shapiro-Wilk tests for all variables related to project success (such as timely completion, budget adherence, achievement of goals, sustainability, stakeholder satisfaction, and overall project success) show p-values of 0.000, which are all less than the significance threshold of 0.05. This indicates that the null hypothesis, which assumes the data follows a

normal distribution, is rejected for each variable. Consequently, the data for all these project-related measures is not normally distributed. This suggests that if normality is required for further analysis, you may need to transform the data or use non-parametric tests, as these tests do not assume normality. The Lilliefors Significance Correction indicates that the Kolmogorov-Smirnov test is



adjusted for the fact that the parameters of the normal distribution (mean and variance) are estimated from the sample rather than being known.

The findings of the correlations between the independent variables and the dependent variables are summarized and presented in Table 3

#### 4.1.4 Correlation Analysis

**Table 3: Correlation between independent variable and dependent variable**

		Stakeholders 'communication management	Project Success
Stakeholders 'communication management	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	234	
Project Success	Pearson Correlation	.744**	1
	Sig. (2-tailed)	.000	
	N	234	234

Source: Field Data, 2025

The correlation analysis in Table 3 reveals a strong positive relationship between stakeholders' communication management and project success, with a Pearson correlation coefficient of 0.744. This indicates that as stakeholders' communication management improves, the likelihood of project success increases significantly. The p-value of 0.000 further confirms the statistical significance of this correlation, suggesting that the relationship is not due to random chance. With a sample size of 234 respondents, the data highlights the crucial role of effective communication management in ensuring project success. This emphasizes that successful project outcomes are

strongly associated with well-managed stakeholder communication throughout the project lifecycle.

#### 4.1.5 Multiple Regression Analysis

Multiple regression analysis was conducted to examine the impact of various independent variables, including stakeholder communication, governance policies, and participation, on the dependent variable, Project Success. The multiple regression analysis was performed with all the assumptions complied with. Table 4 shows the model summary of the results

**Table 4. Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.935 <sup>a</sup>	.874	.872	.17469

a. Predictors: (Constant), Stakeholders 'communication management

The model summary in Table 4 indicates a very strong relationship between the independent variable Stakeholders' Communication Management and the dependent variable Project Success, as evidenced by the R value of 0.935. This suggests that the model explains a high proportion of the variance in project success. The R Square value of 0.874 means that approximately 87.4% of the variability in project success can be explained by stakeholders' communication management alone. The Adjusted R Square value of 0.872, which accounts for the

number of predictors in the model, is very close to the R Square value, further confirming the robustness of the model. The Standard Error of the Estimate (0.17469) indicates a relatively low level of prediction error, suggesting that the model provides reliable estimates of project success based on communication management. Overall, the results underscore the critical role of effective stakeholder communication in influencing project outcomes.

**Table 5: Summary of ANOVA results**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	67.554	4	16.888	553.404	.000 <sup>b</sup>
	Residual	9.735	319	.031		
	Total	77.289	323			

a. Dependent Variable: Stakeholders 'communication management

b. Predictors: (Constant), Project success

The ANOVA results in Table 5 provide a detailed analysis of the relationship between Project Success and Stakeholders' Communication Management. The Regression Sum of Squares (67.554) reflects the variation explained by the model, while the Residual Sum of Squares (9.735) represents the unexplained variation. The F-statistic of 553.404 indicates that the model is highly significant, as shown by the p-value of 0.000, which is well

below the commonly used threshold of 0.05. This statistical significance confirms that Project Success is a strong predictor of Stakeholders' Communication Management. The Mean Square values (16.888 for regression and 0.031 for residual) further support the model's validity, indicating a good fit. Overall, the results suggest that the relationship between project success and communication management is both meaningful and statistically significant.

**Table 6: Regression Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.177	.110		1.600	.000
	Stakeholders 'communication management	.137	.028	.144	4.892	.000

a. Dependent Variable: Project Success

The Regression Coefficients in Table 6 provide detailed information on the impact of Stakeholders' Communication Management on Project Success. The unstandardized coefficient for Stakeholders' Communication Management is 0.137, indicating that for every one-unit increase in communication management, Project Success is expected to increase by 0.137 units. The standardized coefficient (Beta) of 0.144 suggests a positive relationship, although it indicates a relatively modest impact compared to other potential predictors. The t-value of 4.892 and the p-value of 0.000 both show that the relationship is statistically significant, further confirming the importance of effective communication management in ensuring project success. The constant value (0.177) is also significant, with a t-value of 1.600, indicating that other unmeasured factors may influence project success. Overall, the results underscore the importance of communication management in driving the success of the project.

## 4.2. Discussion of Findings

This study aimed to examine the role of stakeholder communication management in the success of the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda. The study utilized both quantitative and qualitative methods to

explore the impact of effective communication strategies on project outcomes. The analysis incorporated descriptive statistics, normality tests, correlation analysis, ANOVA, and regression analysis to understand the relationships between communication management and project success. Additionally, qualitative insights were gathered to further explore stakeholders' perceptions of the communication practices and their effect on the project's overall performance.

The descriptive statistics provided an overview of respondents' views on communication management practices within the SAPMP. Overall, the findings showed that respondents largely agreed on the importance of timely and frequent communication for resolving conflicts and ensuring project success. The majority of stakeholders felt that communication between project team members and other involved parties helped reduce misunderstandings and facilitated smoother project execution. These results indicate that communication is perceived as a critical component in managing the complex relationships among the diverse stakeholders involved in the SAPMP. Normality testing revealed that the data for the project variables did not conform to a normal distribution. The results from the Kolmogorov-Smirnov and Shapiro-Wilk tests indicated significant deviations from normality, with p-values well below the 0.05 threshold. This suggests that

the distribution of responses across the study's variables such as project completion time, stakeholder satisfaction, and goal achievement was skewed. This finding highlights the importance of considering data transformations or the use of non-parametric methods for analyses requiring normally distributed data, as it indicates that the data is not evenly distributed across all participants.

The correlation analysis revealed a strong and statistically significant positive relationship between stakeholders' communication management and project success, with a Pearson correlation coefficient of 0.744. This finding emphasizes that as communication management practices improve, the likelihood of project success increases. The p-value of 0.000 further strengthens the validity of this result, confirming that the relationship between communication and project success is not due to random chance. This underscores the central role of communication in fostering positive project outcomes and highlights the need for improved communication strategies to enhance the success of development projects like SAPMP.

ANOVA results also supported the significant relationship between communication management and project success. The high F-statistic and low p-value (0.000) indicated that the model was statistically significant. This suggests that the variation in project success can be largely explained by communication management practices. The findings point to the importance of managing communication effectively to ensure that all stakeholders are aligned and informed throughout the project lifecycle. Ensuring transparency and consistent information flow is critical in addressing any issues that may arise during the project's implementation phase.

Multiple regression analysis further corroborated these findings. The model summary revealed a strong relationship between stakeholders' communication management and project success, with an R-square value of 0.874, indicating that 87.4% of the variability in project success could be explained by communication management alone. The regression coefficients showed that each unit increase in communication management positively affected project success. These results provide compelling evidence that effective communication is one of the most significant factors influencing the success of the SAPMP and suggests that enhancing communication management can lead to better project outcomes.

Qualitative data obtained from interviews with key stakeholders, including project managers, SPIU staff, and traders, provided additional insights into the importance of communication management. One key theme that emerged was the need for clear, timely, and accessible information. Interviewees emphasized that delays in information sharing often led to confusion and conflict, which could

have been avoided with more effective communication strategies. Several participants also expressed a need for better communication channels that could facilitate real-time updates and provide stakeholders with more opportunities to engage with project teams. This feedback highlighted the gap between ideal communication practices and the actual experiences of stakeholders involved in the project.

The findings of this study are supported by existing literature on the importance of communication management in project success. According to Pinto and Slevin (1988), effective communication is a cornerstone of successful project management, as it ensures that all stakeholders are informed and aligned, which is crucial for making timely decisions and resolving issues. Furthermore, Thomas and Mengel (2018) argue that poor communication often leads to misunderstandings and conflicts that hinder project success. These views are consistent with the results of this study, where respondents emphasized the vital role of communication in resolving conflicts and maintaining smooth project execution, thereby contributing to the overall success of SAPMP in Gisagara District.

Furthermore, qualitative data gathered from interviews revealed additional insights into the communication challenges and opportunities within the project. One notable perspective came from a project team member who highlighted the difficulty in aligning communication strategies across diverse stakeholder groups. This respondent emphasized that while some groups, like farmers, were more receptive to face-to-face communication, others, such as agri-business entrepreneurs and local authorities, preferred digital platforms. This finding aligns with the work of Grönroos (2024), who argues that communication strategies must be tailored to the preferences and communication styles of different stakeholder groups to be effective. The diversity in communication preferences underscores the need for a more flexible and inclusive approach to communication management within the project.

Additionally, a government official involved in the project shared a contrasting viewpoint, suggesting that the lack of clarity in communication channels between project staff and local authorities often led to delays in decision-making. This viewpoint resonates with the findings of Mckenna (2022), who discusses how unclear, or poorly defined communication lines can hinder project execution, particularly in contexts where coordination among multiple stakeholders is required. The official noted that there were occasions when information would reach the local authorities too late, preventing them from acting promptly. This issue of delayed communication is crucial, as it can directly impact on the project's overall success and lead to

inefficiencies. Thus, the qualitative data supports the argument that while communication is vital for project success, the effectiveness of these channels is highly dependent on their timely implementation and clarity, highlighting the need for consistent, clear, and accessible communication systems in multi-stakeholder projects.

## 5. Conclusion and Recommendations

### 5.1 Conclusion

In conclusion, this study underscores the critical role of effective stakeholder communication management in ensuring the success of the Sustainable Agriculture Productivity and Market Linkage Project (SAPMP) in Gisagara District, Rwanda. The findings reveal a strong positive correlation between communication management and project success, highlighting the importance of timely, clear, and accurate communication in fostering stakeholder collaboration and minimizing conflicts. The regression analysis further reinforces that communication management significantly impacts project outcomes, accounting for a substantial portion of the variance in project success. Additionally, qualitative insights emphasize the need for tailored communication strategies to address the diverse preferences of stakeholders and the importance of establishing clear communication channels to avoid delays and inefficiencies.

### 5.2 Recommendations

Based on the study findings, the following recommendations are made:

#### 1. To Project Manager and Communication Teams:

It is recommended that the project implement more effective and diversified communication channels to ensure that all stakeholders are adequately informed and engaged. This can include regular updates through digital platforms, community meetings, and face-to-face interactions to accommodate different stakeholder preferences. Improving communication methods could reduce misunderstandings and foster better collaboration among stakeholders.

#### 2. To Project Manager and Communication Specialists:

Given the variation in stakeholder perceptions about communication effectiveness, it is vital to develop communication strategies that are tailored to the needs and expectations of different stakeholder groups, such as farmers, cooperative

members, traders, and government officials. Prioritizing segmented communication strategies will ensure that information is delivered in the most effective manner for each group, leading to improved project outcomes.

#### 3. To Project Manager and SPIU Staff:

It is recommended that the project incorporates regular feedback mechanisms, such as surveys or focus groups, to assess the effectiveness of communication and address any concerns from stakeholders promptly. Fostering continuous engagement and feedback from stakeholders will allow for better decision-making and improvements in project management and communication, ensuring more successful project execution.

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