

**MONITORING AND EVALUATION PRACTICES AND SUSTAINABILITY OF
AGRICULTURAL SUPPORTED FARMER GROUPS, A CASE OF NWOYA
DISTRICT**

BY

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DECLARATION

I, AMUGE SALOME, with registration number 23/U/0937/MME/PS, hereby declare that the research report entitled "*Monitoring and evaluation practices and sustainability of agricultural supported groups: A Case of Nwoya District*" is entirely my own and has not been published or presented in any other form.

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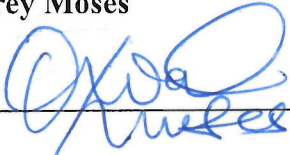
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DEDICATION

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ABSTRACT

This study investigated the influence of Monitoring and Evaluation (M&E) practices on sustainability of agricultural-supported farmer groups in Nwoya District. Despite significant investments from government and non-governmental organizations to bolster food security and rural incomes, many farmer groups struggle to remain viable once external support is withdrawn. The research employed a cross-sectional study design, utilizing both quantitative and qualitative approaches. Data was collected from a sample of farmer group members, group leaders, and district agricultural officers using structured questionnaires and key informant interviews. The study specifically examined four core M&E dimensions: M&E planning, data collection, reporting, and data sharing and utilization. Findings revealed that planning was the strongest M&E practice, while data collection was the weakest, relying on manual paper records and often lacking timeliness. Social and institutional sustainability were strong, economic sustainability was moderate, and environmental sustainability was weakest. Overall, M&E practices had a strong positive relationship with sustainability, with data collection, data sharing and utilisation, and planning contributing significantly, while reporting alone was insufficient unless the information was actually used. There is a gap in how farmer groups use M&E findings to adjust their farming cycles or financial strategies, which directly impacts their resilience against market shocks. It recommends that supporting agencies to shift from top-down monitoring to participatory M&E frameworks that empower local farmers to track their own progress, it further recommends that partners should prioritize capacity building in data management, financial management to ensure that these agricultural initiatives survive beyond initial funding.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This study focused on M & E practices and their influence on the sustainability of agricultural support groups in Nwoya District, Northern Uganda. In response to persistent socio-economic challenges including the aftermath of armed conflict numerous government and non-governmental organizations (NGOs) have supported agricultural groups aimed at improving household income, food security, and resilience. A common approach in agricultural development programming is the use of community groups or farmer groups as the unit of intervention. This group-based model is based on the assumption that collective action enhances peer learning, cost-sharing, improved bargaining power, and more efficient resource use. Group structures are also seen as more sustainable because they foster local ownership and social accountability.

Typically, these groups have been supported through various forms of assistance, including provision of agricultural inputs (seeds, tools, animals), technical training, and access to financial services or markets. While this model has gained traction across Uganda, especially in post-conflict regions like Nwoya, there is increasing concern about the long-term sustainability of these groups. Despite significant financial and technical investment, many supported agricultural groups show mixed results in terms of impact and continuity beyond donor support.

Agriculture remains a critical driver of Uganda's economy, contributing about 24% to GDP and generating 35% of export earnings (World Bank, 2022). However, in areas like Nwoya District, where agriculture is a major livelihood source, sustainability challenges persist. These issues raise questions about the design and implementation of agricultural programs, especially around how well M & E practices are integrated and used to support long-term outcomes.

This study was motivated by the need to understand how M&E practices influence the sustainability of agricultural support groups. It sought to assess how elements such as planning, data collection, reporting, data sharing and use contribute to the resilience and

effectiveness of group-based agricultural interventions. The research did employ a mixed-methods approach, combining quantitative and qualitative tools to generate evidence that can inform practice, policy, and future research.

1.1 Background of the study

Sustainability is a key concern in development programming and reflects the ability of a project to deliver long-term, positive results beyond the period of external support. The Sustainable Development Goals (SDGs) emphasize the importance of approaches that promote lasting quality of life, environmental integrity, and peaceful prosperity (United Nations Development Group, 2016). Sustainable development interventions should ensure continuous flow of benefits, environmental stability, fair distribution of resources, and sustained community participation (Project Management Institute, 2021).

Agricultural support groups are typically made up of individuals working together to improve agricultural productivity, enhance food security, and strengthen rural livelihoods. These groups are often entry points for delivering livelihood support through either community-driven initiatives or external interventions by government and non-governmental organizations (NGOs). The group approach assumes that collective action strengthens accountability, encourages knowledge sharing, reduces individual risks, and increases access to inputs and services. It also assumes that such structures, if well supported, are more likely to be sustainable due to shared responsibility and social cohesion.

Programming for these groups typically includes a package of inputs such as seeds, fertilizers, tree seedlings, animals or birds, as well as capacity building through training on climate-smart agriculture, financial literacy, and cooperative management. These interventions are commonly implemented through national programs such as the Uganda Climate Smart Agriculture Transformation Project, Youth Livelihood Program (YLP), and Operation Wealth Creation. Non-governmental organizations have also played a key role in supporting similar groups. However, the sustainability of these groups has remained a concern. Sustainability in this context refers to the ability of agricultural groups to continue operating effectively over time, protecting the environment, attracting social and economic benefits. It also depends on whether the groups can manage resources independently, respond to new challenges, and maintain member participation. These outcomes are often

shaped by the quality of M & E practices built into the design and implementation of agricultural programs (Maulu et al., 2021; Danso-Abbeam et al., 2020).

The sustainability of agricultural groups, such as farmer groups, cooperatives, producer associations, and community-supported networks, is shaped by four interlinked dimensions: economic, social, environmental, and institutional. Economically, these groups strengthen farmers' livelihoods by pooling resources, reducing costs, and expanding market opportunities, although challenges remain in adapting to dynamic markets and ensuring fair benefit distribution (Malak-Rawlikowska et al., 2019; Setsoafia et al., 2022). Socially, they foster collaboration, equity, and trust within communities, but they can also reproduce inequalities when participation is limited or power is unevenly distributed (Janker et al., 2019; Khan et al., 2021). From an environmental perspective, agricultural support groups play a key role in advancing agroecology, precision farming, and sustainable land management, though financial and technical barriers often restrict widespread adoption (Mottet et al., 2020; Getahun et al., 2024). Institutionally, their long-term viability depends on governance systems, policy support, and organizational structures that ensure accountability and resilience, yet weak leadership and inconsistent policies often undermine their effectiveness (Asongu & Odhiambo, 2021; Branca et al., 2022). Since each of these dimensions influences the others, sustainability cannot be achieved in isolation, and success ultimately requires integrated strategies that balance economic viability, social inclusion, ecological stewardship, and strong institutional frameworks (Ajates, 2020; Zhang et al., 2021).

M&E practices include planning, data collection, reporting, and the use of findings to inform decisions. Planning helps establish clear goals and indicators; data collection ensures accurate and timely evidence; reporting makes performance visible and accountable; and utilization of findings supports continuous improvement. Where these practices are strong, they can enhance program effectiveness and sustainability. Ceesay, (2020) notes that functional M&E systems help identify challenges early, guide corrective action, and build institutional memory. Adego et al. (2018) emphasize the need for strong structures to support climate-smart agriculture, while Ayamga et al., (2023) highlight the role of digital tools in promoting coordination and learning among agricultural stakeholders.

Local participation and leadership are also key. Adenle et al., (2018) argue that when interventions align with local practices and needs, they are more likely to be accepted and sustained. Agroecological systems rooted in indigenous knowledge not only address environmental and economic challenges but also strengthen local ownership (Altieri et al., 2012).

Koohafkan et al., (2012) add that biodiversity and resilience are essential for sustainable farming, especially among smallholder farmers facing climate and market shocks.

Adaptability is another important factor. Dong et al., (2021) and Hart, (2024) point out that institutions capable of adapting to change such as price fluctuations or extreme weather are more likely to remain relevant. M&E practices that are responsive and adaptive can support this flexibility by providing real-time feedback and guiding timely adjustments.

The integration of technology into M&E systems has also been shown to improve sustainability outcomes. For instance, digital platforms can enhance communication, simplify data management, and increase youth engagement in agriculture (Ayamga et al., 2023). Frame et al., (2011) demonstrate that off-grid solar systems and other innovations help communities manage resources more efficiently. Inter-organizational collaboration plays a vital role in creating a supportive environment for sustainability. According to Dong et al., (2021a) and Eidt et al., (2020), partnerships between government agencies, NGOs, and local groups facilitate knowledge exchange and resource mobilization, helping to sustain agricultural systems.

Despite these efforts, challenges persist. Many agricultural groups fail to sustain themselves due to misalignment between program frameworks and local realities. Chinseu et al., (2019) point out that poor policy fit can result in the abandonment of conservation practices, while Cochrane et al., (2024) highlight similar issues in large-scale investments that overlook local agricultural systems. Overreliance on external funding is another critical issue. Ceesay, (2020) and Kativhu et al., (2018) note that when financial support ends, projects without clear sustainability plans often collapse.

Capacity gaps are also a major constraint. Cochrane et al. (2024) and Dong et al. (2021a) stress the importance of training and local empowerment in ensuring continuity. Projects that do not build local knowledge and skills tend to create dependency on external actors. Weak governance and inadequate M&E systems further limit the ability of institutions to manage programs effectively (Islam et al., 2011; Matsa et al., 2023). In addition, lack of training for farmers and extension staff hinders the adoption of new methods (Raj & Aithal, 2018; Dong et al., 2021b).

Cultural practices can also shape project outcomes. Matsa et al. (2023) and Frame et al. (2011) observe that gender norms, ethnic divisions, and traditional power structures can either support or obstruct sustainability. Projects that ignore these dynamics may face resistance or exclusion. Incorporating cultural context into program design and M&E systems can help address these barriers and promote inclusion. Poor planning and unrealistic goals are another factor leading to failure. Raj & Aithal (2018) and Kativhu et al. (2018) argue that projects must be based on a clear understanding of local capacities and needs. Without this, expectations become unachievable, and progress is difficult to sustain.

The study was grounded in two complementary theoretical frameworks: Sustainability Theory and Systems Theory. Sustainability Theory, as defined by scholars like Harrington (2016), Espinosa and Walker (2017) and Peter and Swilling (2014), gives a multi-disciplinary perspective on how agricultural interventions can be sustainable over time by achieving economic viability, social justice, environmental integrity, and institutional resilience. The theory is especially apt for the study because it restates the M&E process as a learning and adaptation process – not just a reporting exercise – which aids the long term viability of agricultural support groups, with increased intergenerational responsibility, participation and adaptability. Systems Theory, which builds from the original concepts of Parsons (1970) and has been developed by others (Bailey 2001, Vidich 2000), sees agricultural support groups as complex, interrelated systems of components, each of which is dependent on the others for function and equilibrium through feedback mechanisms to produce desired ends. The study places M&E as the core feedback process for these groups to learn, adapt, and be responsive to both internal and external disturbances, thus supporting this theory. These theories offer a sound analytical framework for analysing the sustainability of agricultural support groups.

Globally, M & E is seen as critical to achieving and sustaining impact. Effective M&E involves more than data collection and reporting it includes clear planning, consistent tracking, meaningful reporting, and actual use of findings to guide decision-making. These practices allow for evidence-based adaptation, support learning, and improve accountability. Research shows that when M&E is fully integrated into agricultural projects, sustainability outcomes improve because programs are better able to identify risks early, respond to changes, and strengthen community ownership (Ceesay, 2020; Dong et al., 2021). Adaptive M&E systems also help smallholder farmers adjust to climate change, shifting markets, and resource challenges (Altieri et al., 2012; Ayamga et al., 2023).

In Africa, agriculture supports the livelihoods of more than 60% of the population, yet many interventions struggle to remain effective once donor support ends. Sustainability challenges are often linked to weak M&E systems, poor planning, lack of follow-through on evaluation results, and limited capacity at the local level (Kativhu et al., 2018). Cultural practices also influence outcomes. In many African contexts, traditional leadership structures, gender roles, and group dynamics play a central role in how agricultural groups function. If M&E systems do not reflect or adapt to these cultural realities, they may be less effective. Projects that align with local norms and build on indigenous knowledge tend to have greater longevity (Matsa et al., 2023; Frame et al., 2011).

In Uganda, agriculture accounts for about 24% of GDP and employs more than two-thirds of the population (World Bank, 2022). The country has implemented several national programs such as the Youth Livelihood Program (YLP), Operation Wealth Creation, and Uganda Climate Smart Agriculture Transformation Project using agricultural support groups as a model for service delivery. These groups are expected to promote income generation, improve production, and increase resilience to shocks. However, many struggle to sustain their activities over time. A study by the National Agricultural Research Organization (NARO, 2013) showed that only 30% of agricultural programs in Uganda had functioning M&E systems. Challenges include low technical capacity, limited funding, and weak use of evaluation findings in program adjustments (Kasozi, 2018). When M&E systems are not properly planned or used, groups often fail to track progress, identify risks, or apply learning to improve operations leading to collapse after external support ends.

Nwoya District, located in Northern Uganda, offers a relevant case for exploring this issue. Formerly part of Amuru District, Nwoya was created in 2010 and had an estimated population of 220,533 with a poverty rate of 44.3% (UBOS, 2020; UBOS, 2024). The district was heavily affected by two decades of armed conflict and remains one of the regions with high development needs. Agriculture is the main economic activity, and both government programs and NGOs have invested in supporting farmer groups to improve productivity and household income. For instance, the Uganda Climate Smart Agriculture Transformation Project supports 11 groups focused on climate-smart agriculture; Mercy Corps works with 10 groups to promote entrepreneurship and nutrition; CARE International supports women's groups to strengthen economic empowerment; and other organizations like Capable Uganda and Dyere Tek works with vulnerable groups on sustainable farming and livelihoods.

Despite these efforts, sustainability remains a major challenge. According to district reports and studies by the Nwoya District Farmers' Association (2019), only about 15% of agricultural groups remain active after the end of donor support. Many groups dissolve due to poor planning, weak use of M&E data, and lack of strategies to manage risks or secure income beyond the project phase (Mubiru, 2019). Cultural factors also play a role local practices related to leadership, gender roles, and decision-making can either support or limit the effectiveness of agricultural groups. For example, if leadership is based on clan ties rather than competence, or if women are discouraged from participating in group decisions, sustainability may be undermined. It is upon this background that the researcher seeks to conduct the study.

1.2 Problem statement

Despite substantial investments and documented potential for enhancing food security (FAO, 2023; World Bank, 2022) a proportion of these groups, as evidenced by reports from NARO and the Ministry of Local Government and Social Development in Uganda, fail to sustain their impact beyond the project lifespan (Abesiga, 2015; Saferworld, 2019; Davis et al., 2017). This lack of sustainability undermines the intended benefits for millions of households, particularly those facing food insecurity in Africa (World Vision, 2009). While M & E is widely recognized as a critical tool for improving project effectiveness, the precise mechanisms through which M&E practices (specifically planning, data collection, reporting and utilization of data) and cultural practices contribute to the long-term sustainability of agricultural groups remain under-explored (Wachira & James, 2018).

Existing research often examines sustainability factors in isolation (Mukaria, 2017), neglecting the complex interplay of M&E practices and other aspects such as cultural practices within the unique socio-economic and environmental context of project implementation areas/regions often marked by heightened vulnerability and reliance on agricultural groups. This research gap impedes the development of context-specific, evidence-based strategies for enhancing the sustainability of agricultural projects, thereby hindering efforts to build resilient communities and reduce dependency on external aid. Therefore, this study seeks to investigate the nuanced relationship between M&E practices, cultural practices, and the sustainability of agricultural groups within the specific context of Nwoya District, in Northern Uganda, with the aim of providing actionable insights for designing and implementing more effective and enduring agricultural development projects.

1.3 Research objectives

1.3.1 Purpose of the study

The purpose of the study was to examine the influence of monitoring and evaluation practices on the sustainability of supported agricultural groups in Nwoya District, Northern Uganda.

1.3.2 Specific Objectives

Specific objectives were to,

1. To assess the level of M&E practices of supported agricultural groups in Nwoya District.
2. To assess the level of sustainability of supported agricultural groups in Nwoya District.
3. To explore the relationship between M&E practices and sustainability of agricultural supported groups in Nwoya District.
4. To evaluate the moderating effect of cultural practices on M&E practices and sustainability of supported agricultural groups in Nwoya District.

1.4 Research questions

The research questions were as follows,

1. What is the level of M&E practices among the activities of supported agricultural groups in Nwoya District?
2. What is the level of sustainability of supported agricultural groups in Nwoya District?
3. What is the relationship between M&E practices and sustainability of agricultural groups operations in Nwoya District?
4. What is the moderating effect of cultural practices on M&E practices and sustainability in operations of supported agricultural groups?

1.5 Scope of the Study

1.5.1 Content Scope

This study focused on understanding how M&E practices influence the sustainability of supported agricultural groups, particularly in Nwoya District. It assessed the extent to which

M&E practices such as planning, data collection, reporting, data sharing and use are applied within these groups. The study also examined the level of sustainability achieved, focusing on social, economic, environmental and institutional sustainability.

Additionally, it explored the relationship between M&E practices and sustainability, and evaluates the moderating effect of cultural practices on this relationship.

1.5.2 Geographical Scope

The geographical scope of this study was Nwoya District. Nwoya District, which is approximately 300 kilometers from the capital city, Kampala, is located in the Acholi sub-region of Northern Uganda, lies approximately at latitude 2.63°N and longitude 32.00°E, with an average elevation of 990 meters above sea level. The Nwoya District was established in 2010, it was carved out of Amuru District, it has a Population of 220,533, a poverty rate of 44.3% (UBOS, 2020), After being carved out of Amuru District and covers an area of approximately 4,736 km². It shares borders with Amuru to the north, Gulu to the northeast, Oyam to the east, Kiryandongo to the southeast, Masindi to the south, and Buliisa to the southwest. The topography is mainly flat to gently undulating, with soils favorable for agriculture. Major rivers such as the Nile, Ayugi, Unyama, Aswa, Tangi, and Ayago traverse the district, and parts of Murchison Falls National Park are located within its boundaries (Nwoya District Local Government, 2023; The Citizen Report, 2024). The District suffered civil war (Saferworld, 2019) in the past, and has growing investments in agriculture.

The characteristics above, was thought to influence its socio-economic dynamics, and environmental conditions, all of which play a significant role in shaping agricultural groups and sustainability efforts within the area.

The study aimed at capturing M&E practices and their influence on sustainability of agricultural supported groups in Nwoya District. within a specific geographical context.

1.5.3 Time Scope

The study did cover the period from 2018 to 2024, providing a seven-year window to understand how M&E practices effect the sustainability of agricultural support programs in Nwoya District. This period was seen as significant because it captured both the early and more recent phases of intervention, allowing for a comprehensive analysis of how M & E

practices have evolved and influenced sustainability outcomes over time of these groups. It also included enough time to assess the long-term impacts, rather than just short-term results. Conducting the research between July and October 2025 provided timely access to complete data from the 2024 period and ensures that recent developments are captured and analyzed. This timeframe supported the study objectives by offering a rich and relevant data set for evaluating planning, data collection, reporting, and utilization of data on sustainability (economic, social, environmental and institutional), with cultural practices as a moderating variable.

1.6 Significance of the Study

This study was conducted in partial fulfilment of the requirements for the award of a Master of Monitoring & Evaluation. It also does serve to enhance the researcher's practical understanding of how M&E practices influence the sustainability of agricultural support groups, particularly in a rural development context.

The findings of this study are important to a range of stakeholders. For NGOs and development agencies, the offers insights into how specific M&E practices such as planning, data collection, reporting, and use of findings affect the sustainability of agricultural support groups in Nwoya District. This knowledge can be used to design more effective, responsive, and contextually grounded programs that are better equipped to deliver lasting benefits.

For the local community and residents of Nwoya District, the study provides a clearer understanding of the dynamics influencing the success and sustainability of agricultural groups. This can empower community members to engage more actively in development efforts, support local ownership, and encourage collective responsibility for maintaining and improving group performance.

Government authorities and policymakers, both at the district and national levels, can also benefit from the study's findings. By identifying the key M&E-related factors that contribute to sustainability, the could inform policy decisions, guide resource allocation, and support the development of strategies aimed at strengthening agricultural livelihoods and rural development.

The study adds to academic and research literature by providing empirical evidence on the link between M&E practices and sustainability. It supports further theoretical development and offers a foundation for future studies in development planning, sustainability, and the role of M & E in community-based initiatives.

This study is relevant to donors and funding agencies interested in supporting sustainable development initiatives. By highlighting how M&E practices influence outcomes, funders can make more informed decisions around investment, performance tracking, and support strategies that lead to greater impact and accountability in rural development efforts in Nwoya District and similar contexts.

1.6 Conceptual framework

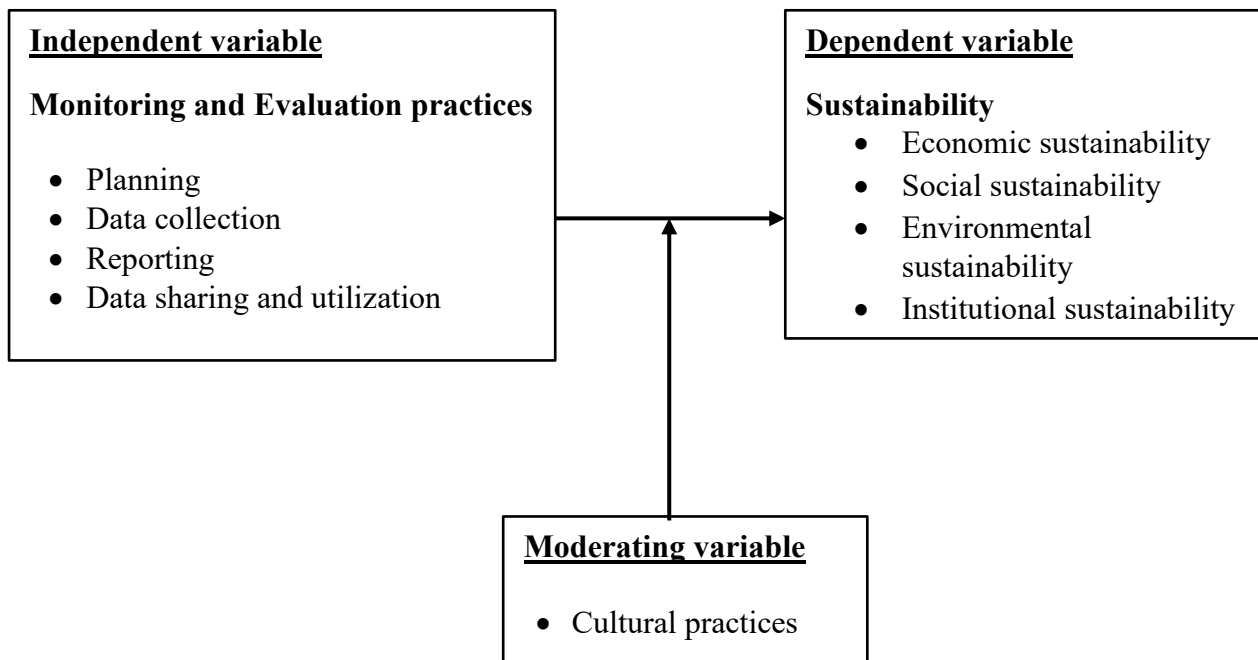


Figure 1. 1: Showing the conceptual framework

Source : (China & Kamande, 2021) and (Sang, 2015) with modifications from the researcher (2025).

This conceptual framework explored how M & E practices influence the sustainability of a project, with cultural practices acting as a moderating factor.

The independent variable in this framework was M & E practices. These included four main components: planning, data collection, reporting, and utilization of M&E findings. planning

involved setting clear objectives, defining indicators, and outlining how progress could be tracked. Data collection refers to gathering accurate and timely information throughout the project's implementation. Reporting focused on organizing and presenting the data in a way that communicates progress, challenges, and outcomes. Data sharing and utilization meant taking the insights gathered and applying them to improve decisions, strategies, and overall project direction. These elements together form a system for learning and accountability that could directly impact how well agricultural projects are sustained over time.

Sustainability, the dependent variable in this study, did refers to a project or program's ability to continue delivering benefits after external support ends and was understood across four dimensions: economic, social, environmental, and institutional. Economic sustainability focused on initiatives generate lasting financial benefits and stable livelihoods. Social sustainability considered the long-term impact on communities, including equity, inclusion, and social cohesion, while environmental sustainability considered the project's effects on natural resources and ecosystems to ensure they are preserved for the future and Institutional sustainability did consider the capacity of organizations and governance structures to maintain programs and adapt over time.

The moderating variable was. cultural practices, these were assumed to more likely result in sustainable outcomes. Therefore, the success of agricultural groups was thought to depends not only cultural practices.

Cultural practices were considered as a modorating factor that could contribute to long-term sustainability

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides a comprehensive review of the literature on monitoring and evaluation (M&E) practices and their relationship with the sustainability of agricultural support groups. The review examines the theoretical foundations for both sustainability and M&E practices, highlighting how systematic tracking, assessment, and feedback mechanisms influence the long-term success of agricultural initiatives. Key components such as the integration of financial and non-financial growth, capacity building, and alignment with local cultural practices are explored in relation to sustaining project outcomes. The review also identified gaps in current knowledge, particularly regarding how M&E systems could be effectively adapted to address the unique challenges faced by agricultural groups in rural settings. By addressing these gaps, the chapter aims to provide insights that inform future research and strengthen strategies for achieving lasting sustainability in agricultural development programs.

2.1 Theoretical Framework

This study was grounded in both Sustainability Theory and Systems Theory, each providing a different lens to understand the relationship between M&E practices and sustainability in agricultural projects.

2.1.1 Sustainability Theory by Brundtland (1987)

The concept of sustainable development gained prominence through the Brundtland Report, *Our Common Future*, published by the World Commission on Environment and Development in 1987. The report defines sustainable development as meeting the needs of the present without compromising the ability of future generations to meet their own needs. It emphasizes the importance of balancing human needs, economic development and the responsible use of resources to ensure lasting benefits.

In the context of supported agricultural groups, this concept suggests that sustainability goes beyond achieving project targets during the funding period. It involves the ability of groups to continue their activities, maintain their livelihoods and benefit from development

interventions even after external support ends. This provides a useful foundation for examining how monitoring and evaluation practices contribute to the continued functioning of agricultural groups in Nwoya District.

However, while the Brundtland concept explains the importance of sustaining development benefits over time, it does not specifically explain how monitoring and evaluation practices influence group sustainability. Therefore, it is complemented by other frameworks that provide a more detailed understanding of the factors influencing the long-term performance of agricultural groups.

Sustainability theory provides a multidisciplinary framework for understanding how systems, practices, and interventions can endure over time without depleting the resources or social structures on which they rely. At its core, sustainability is concerned with meeting present needs without compromising the ability of future generations to meet theirs. While originally rooted in environmental and ecological thinking, sustainability theory has evolved to encompass economic viability, social equity, and institutional resilience (Harrington, 2016). These dimensions are especially important in rural development, where the long-term success of agricultural support groups depends not only on funding but also on community participation, local knowledge, and continued capacity building.

Sustainability theory offers a useful lens for understanding how agricultural support groups can remain effective over time, especially through strong monitoring and evaluation (M&E) practices. One key assumption is intergenerational responsibility, which promotes long-term planning to ensure current actions do not limit future opportunities (Espinosa & Walker, 2017). The theory also emphasizes systems thinking, recognizing that sustainability depends on the interaction of social, economic, and institutional factors, which M&E helps to track and adjust (Peter & Swilling, 2014). Participation and inclusion are crucial, as sustainable outcomes require active involvement from all community members, and M&E systems that reflect local input tend to be more effective (Kohon, 2018; Harrington, 2016). Finally, sustainability depends on adaptability. Flexible, learning-focused M&E frameworks allow agricultural groups to adjust to change and improve over time (Espinosa & Walker, 2017). These assumptions together highlight the role of M&E not just in measuring progress, but in actively supporting long-term resilience.

Sustainability also involves long-term cost-effectiveness, particularly in development and infrastructure projects. Batouli et al., (2017) demonstrate how life cycle assessments and life cycle cost analysis can be applied in technical decision-making to ensure durability and resource efficiency. While this example comes from transport infrastructure, the same logic applies to rural agricultural development. Groups that rely on expensive, donor-driven processes without building internal capacity are less likely to persist. M&E systems that track costs, local capacity, and long-term maintenance contribute to identifying sustainable paths forward.

Bringing these assumptions together, sustainability theory offers a strong foundation for analyzing M&E practices in agricultural support groups. Rather than viewing M&E simply as a reporting function, sustainability theory reframes it as a learning and adaptation process that supports long-term viability. For support groups in Nwoya District, M&E can track not only immediate outcomes like yields or training attendance but also deeper indicators of sustainability, such as knowledge transfer, group cohesion, financial independence, and community ownership. Peter & Swilling, (2014) further stress the importance of modeling sustainability as a transition process, not a fixed state. This means that M&E should help support groups move toward autonomy, resilience, and responsiveness in an unpredictable environment.

Sustainability theory provides a comprehensive lens through which to understand how agricultural support groups can persist beyond the short-term lifespan of donor funding.

2.1.2 Systems Theory Ludwig von Bertalanffy (1968)

The social systems theory of group functioning by Ludwig von Bertalanffy (1968) will guide the study. Systems Theory is a conceptual framework that views organizations, projects, or groups as complex systems composed of interrelated and interdependent components. It emphasizes understanding how various elements interact within a system and with external factors to achieve specific outcomes. For this study, systems theory provides a comprehensive approach to assess the influence of M&E on sustainability of smallholder farmer groups.

Systems theory is a broad analytical framework used to understand the functioning of complex entities by viewing them as interconnected and interdependent components working together as a whole. Originating from the biological sciences, the theory was later expanded

into the social sciences, particularly by Talcott Parsons and other mid-20th-century theorists (Bailey, 2001; Parsons, 1970). Systems theory emphasizes that no part of a system exists in isolation; instead, all elements are linked, and their interactions shape the system's overall behavior and outcomes. This perspective is valuable in understanding how various actors and structures within agricultural support groups influence their long-term sustainability, especially through mechanisms like monitoring and evaluation.

A foundational assumption of systems theory is interdependence. Each component of a system affects and is affected by the others. As Bailey, (2001) explains, changes in one part of the system produce ripple effects that impact the entire structure. In the case of agricultural support groups in Nwoya District, internal factors such as leadership, member participation, and training are deeply connected to external factors like donor support, policy frameworks, and environmental conditions. Another central idea is that systems seek dynamic equilibrium. They are open systems that must constantly adapt to internal or external disturbances to maintain stability (Parsons, 1970). For agricultural groups, this could mean adjusting operations in response to changes in funding, market conditions, or climate patterns to stay functional.

Feedback loops are a key feature of systems theory. Feedback enables a system to self-regulate and make corrections. Positive feedback encourages growth or change, while negative feedback helps stabilize the system by reducing deviations (Bailey, 2001). Monitoring and evaluation (M&E) practices serve this exact function in development settings. M&E allows agricultural support groups to assess progress, identify gaps, and modify practices accordingly. Without functioning feedback mechanisms, a system becomes less responsive and more prone to failure. Therefore, strong M&E structures are not external add-ons, but essential components of a sustainable system.

Systems are also goal-oriented. They operate with certain objectives, and all components work ideally in coordination toward achieving those goals. In the context of agriculture, these goals may include improving livelihoods, promoting food security, or building resilience among farmers. As Parsons, (1970) noted, goal attainment is one of the fundamental functions that every social system must fulfill. M&E practices help ensure that goals are being met and realigned when necessary, thereby contributing to the sustainability of support groups. In addition, systems often include subsystems that operate at different levels. An agricultural group is itself a system but is also part of broader systems involving NGOs,

government agencies, and local communities. These nested structures mean that sustainability cannot be examined solely at the group level; instead, it must be understood in terms of interactions between multiple layers of influence (Vidich, 2000).

Homans emphasized that group behavior arises from patterns of interaction, shared sentiments, and learned activities, all of which form a system of social action (Treviño, 2015). His concern with how informal social exchanges build cohesion and structure within groups aligns with systems theory's focus on internal dynamics. According to Muldoon et al. (2018), Homans' view helps correct the misconception that group dynamics are simply a matter of individual behavior, instead showing how these dynamics function systemically. Gerhardt, (2015) notes that Homans' approach emerged partly in response to Parsons' structural functionalism, offering a more behaviorally grounded understanding of social systems. Nevertheless, both theorists agree that systems, whether formal or informal, require balance and adaptation to survive over time.

Applying systems theory to the current study offers a valuable lens for examining how M&E practices contribute to the sustainability of agricultural support groups in Nwoya District. These groups function within complex systems where multiple internal and external factors must align for long-term impact. M&E serves as the feedback mechanism that ensures systems are learning, adapting, and maintaining their equilibrium. Without it, support groups risk losing direction, coherence, and ultimately, viability. By drawing from systems theory, this study can explore how monitoring and evaluation practices operate not just as technical tools but as integral parts of the larger system that sustains agricultural development efforts.

2.2 Monitoring and Evaluation practices of agricultural supported groups

M & E are central to the success of agricultural initiatives, especially those involving supported groups such as farmer groups, cooperatives, smallholder networks, and community-based organizations. These practices ensure that projects are not only implemented according to plan but that their impact is measured, understood, and used to inform future actions. The process typically involves four interlinked stages: planning, data collection, reporting, and the use of findings. The effectiveness of M&E in agriculture depends on how well these stages are executed and how responsive they are to both technological advances and the socio-economic realities of rural settings.

Effective planning is the cornerstone of any successful agricultural group. For some supported groups such as farmer cooperatives or women-led producer associations, planning not only determines what success looks like but also sets the terms for how progress will be measured and assessed. Okafor, (2021) emphasizes that without clear, measurable objectives tied to local realities, M&E activities tend to drift into formality rather than driving real change. A poorly structured planning phase often results in fragmented indicators, disjointed monitoring activities, and evaluations that fail to influence future programming. Kamaara, (2024) similarly notes that M&E frameworks developed in isolation from farmers and community actors often lack ownership, which weakens data quality and ultimately the credibility of findings.

Planning should also be context-sensitive and inclusive. For instance, Huyer & Partey, (2020) argue that planning without a gender lens risks excluding the voices and experiences of women who play central roles in agriculture, particularly in climate-vulnerable regions. They advocate for participatory methods during the planning stage that incorporate the lived experiences of both men and women, ensuring the monitoring framework reflects differentiated roles and impacts. Avtar et al., (2020) support the integration of geospatial data in agricultural planning to account for environmental dynamics such as soil quality, rainfall variability, and land degradation, which can affect project design and evaluation metrics. This integration allows M&E systems to be more adaptive to climate uncertainties and natural resource conditions factors that are increasingly important in sustainable agriculture.

The accuracy and reliability of M&E findings are deeply influenced by the quality of data collected, yet data collection in agriculture faces persistent logistical and technological challenges. Traditional methods like farm visits and manual records are still widely used, but these can be labor-intensive, prone to human error, and difficult to scale. Quandt et al., (2020) demonstrate that mobile phones, even basic models, are increasingly enabling farmers in Tanzania to provide timely data, particularly regarding yields, input use, and market access. These digital interactions not only enhance data quality but also improve communication between farmers and extension officers. Mushi et al., (2022) further confirm the value of mobile-based platforms and remote servers, which have facilitated cloud data storage and retrieval in Tanzanian agriculture, allowing both farmers and managers to access and contribute to real-time databases.

Advanced technologies like drones and sensors are also enhancing agricultural M&E. Sibanda et al., (2022) provide evidence that drones are being effectively used to monitor surface water availability and vegetation cover, especially in the Global South. These high-resolution images enable precise tracking of changes in land use and agricultural health, reducing the need for extensive ground verification. Tmušić et al., (2020) support this by showing how unmanned aerial systems help assess crop health, irrigation effectiveness, and pest prevalence at large scales. These tools reduce both the time and cost of data collection while offering a level of detail unattainable through traditional fieldwork. However, these innovations also require proper training and infrastructure, which are often lacking in grassroots farmer groups. Thus, while technology expands possibilities, its impact is dependent on equitable access and capacity building.

Reporting translates collected data into actionable insights. However, in many agricultural development projects, reports tend to be bulky, technical, and primarily produced to meet donor obligations rather than to guide on-the-ground decision-making. Owuor, (2020) critiques this tendency, pointing out that delayed and overly complex reports often render data obsolete by the time they are reviewed. This disconnect reduces the value of M&E as a real-time management tool. Hassan et al., (2021) argue for dynamic reporting platforms in smart agriculture that use digital dashboards and interactive data visualizations to present findings in real time. These tools are increasingly used in precision agriculture to offer farmers and managers immediate feedback on crop health, weather conditions, and farm productivity.

Reyes et al., (2020) found that in traditional Japanese agricultural systems, customized reporting tools such as community-based indicators and storytelling were more effective than formal reports in promoting sustainability and farmer engagement. This echoes findings by Sanders et al., (2020), who show that real-time antimicrobial use reporting in veterinary systems led to better compliance and stewardship among farmers when data were simplified and locally contextualized. These studies highlight the importance of adjusting the reporting format to match the audience. Whether through village meetings, visual tools, or simplified feedback summaries, reporting must serve its users not just satisfy bureaucratic checklists.

Perhaps the most underutilized aspect of M&E is the application of findings to decision-making. Okafor, (2021) argues that many agricultural projects collect and report data but fail to translate findings into improved planning or practices. This often results from weak

feedback loops between M&E teams and project implementers. Owuor, (2020) reinforces this point, noting that findings often remain in final reports rather than being used to inform adaptive management. As a result, mistakes are repeated, and successes are not scaled. This is especially problematic in agriculture, where seasonal changes, pest outbreaks, and market fluctuations require timely responses. Without mechanisms to use findings swiftly, M&E risks becoming an administrative formality rather than a strategic tool.

More promising practices are emerging. Saiz-Rubio & Rovira-Más, (2020) describe how in smart farming environments, data from sensors and remote devices are used in real time to fine-tune decisions about irrigation, fertilizer use, and harvest timing. This use of data enables continuous adaptation based on actual field conditions. Similarly, Kamaara, (2024) advocates for participatory M&E systems that involve farmers in interpreting data and co-designing responses. This approach not only increases the relevance of M&E findings but also builds local capacity and ownership. Kühl et al., (2020) further stress the value of integrated monitoring cultures, where agricultural data is shared across sectors such as water, health, and biodiversity so findings can be used holistically to inform rural development and sustainability goals.

2.3 Sustainability of agricultural supported groups

Agricultural support groups have become central in advancing sustainable farming practices. These groups provide not only economic benefits through collective bargaining and improved market access but also strengthen social cohesion, environmental stewardship, and institutional resilience. Given the growing challenges of food insecurity, climate change, and global market volatility, their sustainability is now a critical area of inquiry. A balanced perspective on the economic, social, environmental, and institutional dimensions of sustainability helps to explain both the opportunities and limitations of agricultural support groups in different contexts.

Scholars widely recognize that the sustainability of agricultural support groups depends on the interplay of economic, social, environmental, and institutional dimensions. Economically, cooperatives and short food supply chains can stabilize farmer incomes and reduce risks by improving market access and sharing production costs (Malak-Rawlikowska et al., 2019; Matzembacher & Meira, 2019). Socially, trust, equity, and participation within these groups strengthen community resilience, although such social sustainability is often overlooked in

policy and practice (Janker et al., 2019; Khan et al., 2021). Environmental sustainability is advanced through collective adoption of sustainable practices such as reduced chemical inputs and precision agriculture, though knowledge gaps and weak incentives still limit widespread implementation (Siebrecht, 2020; Getahun et al., 2024). Finally, institutional sustainability emerges as critical since supportive policies, governance structures, and access to finance determine whether groups can maintain long-term benefits, especially in resource-constrained regions (Ajates, 2020; Asongu & Odhiambo, 2021). Together, these findings highlight that agricultural support groups succeed when strategies holistically integrate the four sustainability pillars rather than treating them in isolation (Lampridi et al., 2019; Zhang et al., 2021).

Many models that define sustainability according to (Phung, 2019), one of the model that defines the four dimensions of sustainability is prism of sustainability.

2.3.1 Economic Sustainability

Economic sustainability underpins the survival of agricultural support groups, as financial stability determines their capacity to deliver long-term benefits. Cooperatives and community-supported agriculture models are particularly effective at stabilizing farmer incomes by pooling resources, lowering costs, and strengthening market access (Ajates, 2020; Malak-Rawlikowska et al., 2019). These models also provide risk-sharing mechanisms, such as community-supported agriculture arrangements where consumers prepay for produce, offering farmers security against market fluctuations (Matzembacher & Meira, 2019; Egli et al., 2023). By securing steady cash flow and reducing dependence on volatile intermediaries, such groups improve the financial resilience of smallholders.

However, economic sustainability is often threatened by systemic barriers such as poor infrastructure, high transaction costs, and lack of access to financial services. Myeni et al. (2019) found that in South Africa, smallholders faced limited productivity because of structural challenges that collective action alone could not resolve. Similarly, Piñeiro et al., (2020) argue that incentives for adopting sustainable practices are often inadequate or misaligned with farmer needs, leading to uneven adoption. These findings emphasize that while groups enhance economic potential, broader systemic reforms are necessary to sustain financial viability.

Empirical evidence shows that sustainable agricultural practices can positively impact farm incomes, but results are context-specific. For instance, Setsoafia et al., (2022) report that sustainable practices in northern Ghana improved both farm income and food security, while Branca et al., (2022) highlight that the benefits are stronger when combined with supportive institutional frameworks. Conversely, Serebrennikov et al., (2020) demonstrate that in Europe, economic outcomes of sustainable practices vary widely because of differing policy incentives and farmer perceptions. These studies underscore the critical role of context in shaping economic sustainability.

Looking forward, diversification and technological innovation appear central to long-term economic sustainability. Egli et al., (2023) note that community-supported agriculture models foster diversification by encouraging multi-crop production, which protects farmers from shocks. Similarly, Getahun et al. (2024) stress that precision agriculture improves input efficiency, reducing costs while maintaining yields. When combined with institutional support and market-oriented incentives (Mottet et al., 2020; Streimikis & Baležentis, 2020), such innovations strengthen the long-term economic sustainability of agricultural groups.

2.3.2 Social Sustainability

Social sustainability focuses on human well-being, equity, and inclusion within agricultural groups. By fostering cooperation and shared responsibility, support groups enhance social capital and resilience (Janker et al., 2019; Ajates, 2020). These relationships allow communities to respond collectively to challenges such as climate shocks or market instability. Community-supported agriculture also strengthens connections between producers and consumers, promoting solidarity and shared understanding of risks and benefits (Matzembacher & Meira, 2019; Egli et al., 2023).

Despite its importance, social sustainability is often underrepresented in sustainability assessment tools, which prioritize economic and environmental indicators (Janker & Mann, 2020; Lampridi et al., 2019). This gap risks excluding critical factors such as gender equity, labor conditions, and fair participation. Khan et al., (2021) argue that social sustainability adoption in supply chains faces barriers such as lack of awareness and resistance to change. Likewise, Srisathan et al., (2020) emphasize that organizational culture must be aligned with sustainability principles to create inclusive environments. Neglecting these dimensions can erode trust and cohesion in agricultural groups.

Evidence suggests that when social sustainability principles are embedded, agricultural groups achieve stronger cohesion and long-term stability. Branca et al. (2022) show that inclusive practices, such as equitable distribution of benefits and participatory decision-making, enhance farmer loyalty and group resilience. Similarly, Janker and Mann (2020) argue that groups that value social outcomes are more likely to sustain farmer participation, even when economic conditions fluctuate. These insights highlight that social sustainability is not a secondary concern but a core determinant of group endurance.

Social sustainability also enhances external legitimacy and reputation. Sroufe and Gopalakrishna-Remani (2019) found that firms with strong social sustainability practices enjoy better reputational outcomes, which translate into improved financial performance. In agriculture, this is particularly evident in direct-to-consumer models, where ethical and social commitments drive consumer loyalty (Malak-Rawlikowska et al., 2019; Egli et al., 2023). This demonstrates that social sustainability not only strengthens internal cohesion but also creates positive feedback loops with markets and consumers.

2.3.3 Environmental Sustainability

Environmental sustainability ensures the long-term viability of agricultural systems by protecting ecosystems and natural resources. Agricultural groups encourage adoption of practices such as reduced chemical use, soil conservation, and biodiversity protection (Egli et al., 2023; Lampridi et al., 2019). These practices also align with broader policy priorities, including climate change mitigation and water conservation (Streimikis & Baležentis, 2020; Zhang et al., 2021). Collective approaches allow farmers to scale sustainable practices, creating larger ecological impacts than individual efforts.

Technological innovations are expanding opportunities for environmental sustainability. Getahun et al. (2024) demonstrate that precision agriculture enhances efficiency by reducing fertilizer and pesticide use, lowering environmental harm while improving yields. Digital technologies and green finance also play complementary roles by making environmentally sustainable practices more accessible and affordable (Feroz et al., 2021; Udeagha & Muchapondwa, 2023). These innovations illustrate how organizational and financial structures are critical for scaling ecological sustainability.

However, the adoption of environmentally sustainable practices is uneven. Siebrecht (2020) points out that while sustainable practices are well understood, farmers often lack incentives, knowledge, or resources for implementation. Similarly, Serebrennikov et al. (2020) argue that adoption in Europe is influenced by systemic factors such as subsidies, advisory services, and peer networks. Without supportive conditions, many farmers partially adopt practices, reducing potential ecological benefits. These barriers highlight the importance of institutional support and farmer education.

Education and awareness are vital for embedding environmental sustainability. Uralovich et al. (2023) argue that environmental education equips farmers with the skills and knowledge to implement sustainable practices consistently. Similarly, Glavič (2020) identifies education as central to long-term cultural shifts toward sustainability. Moreover, when consumers demand environmentally responsible production, farmers are further incentivized to adopt sustainable practices (Matzembacher & Meira, 2019; Egli et al., 2023). Thus, environmental sustainability is shaped by both producer capacities and consumer expectations.

2.3.4 Institutional Sustainability

Institutional sustainability provides the governance and policy framework within which agricultural groups operate. Ajates (2020) emphasizes that cooperatives must not only serve their members but also engage with political processes to shape supportive policies. Institutional frameworks ensure accountability, fairness, and adaptability, which are essential for group survival (Balasubramanian & Balaji, 2021; Hariram et al., 2023). Without strong institutions, economic and environmental gains may be undermined by weak governance.

Policy coherence is critical for institutional sustainability. Mottet et al. (2020) highlight that tools like the Agroecology Performance Evaluation (TAPE) align local practices with global sustainability goals, while Streimikis and Baležentis (2020) argue that integration of agricultural, climate, and environmental policies strengthens farmer adoption of sustainable practices. Similarly, Piñeiro et al. (2020) stress that incentives must be designed to reward long-term sustainability rather than short-term productivity. These insights show how institutional alignment fosters more consistent sustainability outcomes.

Weak governance remains a major barrier, especially in developing regions. Asongu and Odhiambo (2021) report that poor governance in sub-Saharan Africa has constrained efforts

to embed environmental sustainability in agriculture. Myeni et al. (2019) similarly found that inadequate institutional support limited smallholder productivity in South Africa. NGOs and civil society have tried to fill governance gaps by promoting sustainability reporting and accountability frameworks (Sisaye, 2021; Zacher et al., 2023). Yet these efforts cannot replace the role of systemic institutional reform.

Strong internal governance is also essential for institutional sustainability. Groups with transparent structures, participatory decision-making, and mechanisms for learning are better able to adapt to changing environments (Balasubramanian & Balaji, 2021; Mohsin et al., 2024). Moreover, organizations that integrate sustainability into their culture and governance are more resilient in the face of external shocks (Srisathan et al., 2020; Hariram et al., 2023). Institutional sustainability therefore acts as the backbone of agricultural groups, tying together economic, social, and environmental goals into a coherent framework.

2.4 M&E practices and sustainability of agricultural supported groups

A strong M & E planning phase is foundational for the sustainability of agricultural support groups. Effective planning helps clarify objectives, define realistic indicators, and establish timelines, ensuring resources are used efficiently and impactfully. For example, Okafor, (2021) emphasizes that well-structured M&E systems contribute directly to project performance, while Owuor, (2020) argues that project failure is often a symptom of poor M&E design at inception. Similarly, Kabato et al., (2025) highlight that strategic planning in climate-smart agriculture interventions improves long-term outcomes by aligning community goals with environmental and productivity targets. This clarity in early-stage planning ensures that support groups remain focused and adaptive in the face of external challenges such as climate variability or market shifts.

Data collection practices within M&E play a critical role in building resilience and ensuring that agriculture-supported groups can sustain themselves beyond initial funding cycles. Hassan et al., (2021) note that the increasing integration of smart technologies in data collection enables more accurate and real-time insights into farm performance. At the same time, Jouanjean et al., (2020) caution that without clear data governance and capacity building, the benefits of these technologies remain out of reach for many smallholder groups. When data collection is systematic and inclusive, it helps track the adoption of resilient practices, as shown by Amelework et al., (2021), who demonstrate how data-backed

promotion of cassava in South Africa improved food system sustainability. Bolfe et al., (2020) reinforce this by documenting how precision agriculture tools enhance farmer awareness and encourage sustainable land management when combined with reliable monitoring efforts.

Effective reporting in M&E transforms raw data into actionable knowledge, fostering trust and accountability among agricultural groups and their stakeholders. Gava et al., (2020) argue that reporting is most impactful when it bridges technical analysis with local realities, helping farmers understand not just what is happening but why it matters. Similarly, Reyes et al., (2020) demonstrate that consistent and localized reporting enhances sustainability by encouraging adaptive management, especially in traditional agricultural systems. When farmers and support organizations receive timely and relevant reports, they are more likely to engage in collaborative decision-making, which improves implementation and reduces the risk of program fatigue. According to Sanders et al., (2020), transparency in reporting also supports stewardship practices, such as responsible input use, which reinforces long-term productivity.

Data sharing and utilization is perhaps the most direct pathway through which sustainability is achieved. Findings must inform decisions on scaling, adapting, or redesigning interventions. As Pretty et al., (2020) point out, the growth of farmer groups for sustainable land management relies heavily on feedback loops that turn lessons learned into future action. Similarly, Nguyen et al., (2023) argue that in the context of climate and land-use transformation, acting on M&E insights can mitigate environmental degradation and improve agricultural outcomes. Without this step, M&E becomes a mere formality rather than a driver of change. Lefore et al., (2021) show that inclusive strategies based on evaluation findings, such as solar irrigation tailored to smallholders, have a measurable impact on both productivity and ecological balance.

Across all components of M&E planning, data collection, reporting, and data sharing/utilisation, the underlying link to sustainability lies in how these practices enable adaptive learning and inclusive participation. Movilla-Pateiro et al., (2021) stress that sustainability metrics must evolve from passive measurement tools into active decision aids. Meanwhile, Streimikis & Baležentis, (2020) suggest that integrating sustainability goals into every step of agricultural programming enhances resilience at both farm and community levels. These insights are echoed by Springmann & Freund, (2022), who argue that reformed

agricultural support systems, when grounded in evidence and participatory evaluation, are more likely to sustain livelihoods and environmental health. When M&E is treated not as an end but as an ongoing conversation, it becomes a powerful engine for transformation in agriculture-supported groups.

2.5 Influence of cultural practices on M&E practices and sustainability of agricultural supported groups

Cultural practices serve as a critical lens through which M&E planning in agricultural projects is either accepted or resisted. M&E planning that is rigid and detached from local cultural contexts often struggles to gain traction among farming communities. In many traditional rural settings, planning is not just a technical process but a communal activity shaped by shared beliefs, social roles, and power dynamics. Adolph et al., (2020) argue that sustainable agricultural intensification relies on managing trade-offs within the complex realities of local farming systems, which are inherently shaped by cultural norms. They emphasize that unless M&E planning reflects farmers' socio-cultural priorities such as land tenure customs or communal labor systems efforts to establish meaningful indicators will likely fail. Similarly, Mills et al., (2021) point out that the inclusion of social indicators in agri-environmental schemes helps capture the nuances of rural life, enhancing the relevance and uptake of M&E frameworks. When cultural practices are ignored, planning becomes a top-down exercise that communities may view with skepticism or outright rejection.

Data collection is equally moderated by cultural norms, especially in how knowledge is shared and who is allowed to collect or provide information. The process of gathering information from agricultural support groups is not culturally neutral; it often hinges on the level of trust between enumerators and community members, as well as on the perceived legitimacy of the process. Mary, (2024) highlights the importance of culturally competent enumerators who understand local dialects, taboos, and communication patterns. This cultural fluency can significantly improve data accuracy and participation rates. Marengo et al., (2022) further reinforce this by showing that agricultural adaptation strategies in Northeast Brazil failed when data collection efforts did not engage local networks and knowledge systems. They note that many farmers withheld information or provided skewed responses when they felt the methods were alien or extractive. These findings highlight the need for culturally sensitive approaches that not only gather data but also validate local knowledge systems as credible and valuable.

The way M&E findings are reported back to agricultural groups is also deeply influenced by cultural traditions of communication, learning, and accountability. Many farming communities, especially in Sub-Saharan Africa and Latin America, rely heavily on oral traditions, storytelling, and communal feedback forums. In such settings, conventional reporting tools such as written reports or statistical dashboards may fail to communicate meaning effectively. Pretty et al., (2020) emphasize the success of farmer field schools and participatory workshops in promoting sustainable practices, precisely because these formats align with cultural modes of knowledge exchange. Similarly, Chopin et al., (2021) advocate for the reframing of sustainability assessments to include qualitative, narrative-based indicators that resonate with the lived experiences of smallholders. These culturally embedded reporting practices not only improve comprehension but also encourage collective ownership of M&E results, fostering a more participatory and responsive feedback loop.

Utilization of M&E findings perhaps the most crucial step for long-term impact is also subject to cultural interpretation and local validation. In many cases, findings from M&E are not acted upon unless they receive endorsement from community leaders, elders, or respected practitioners. Cultural legitimacy often trumps technical evidence when it comes to behavioral change. Movilla-Pateiro et al., (2021) argue that sustainability metrics are most effective when they are not only scientifically robust but also contextually relevant to the farming systems in which they are deployed. Blakeney, (2022) adds that innovation in agriculture gains traction when it is communicated through trusted networks and is seen as an extension of traditional practices rather than a replacement. This highlights the importance of involving cultural gatekeepers early in the M&E process to ensure that findings are not just understood but acted upon within the community.

Cultural practices also play a moderating role in enhancing the sustainability dimension of income security among agricultural support groups. For example, traditional savings groups, kinship-based support systems, and informal credit networks are all culturally embedded structures that help stabilize income in the face of shocks. M&E systems that acknowledge and work with these existing mechanisms are more likely to succeed. Hazell & Varangis, (2020) show that community-based insurance models gain wider acceptance when designed in line with local norms around risk sharing and collective decision-making. Wakweya, (2023) similarly finds that climate-smart practices when introduced through culturally familiar systems like cooperatives or village councils lead to better income diversification

and resilience. These studies underline the fact that culturally integrated M&E helps tailor interventions in ways that farmers not only understand but also value, leading to more secure income outcomes.

Cultural dimensions also significantly influence the pathway to improved sustainability. In many traditional farming communities, practices like intercropping, rotational grazing, and mixed cropping are rooted in cultural heritage rather than formal agronomic knowledge. M&E that respects and measures these indigenous practices can help refine and scale up what is already working, rather than imposing unfamiliar methods. Adolph et al., (2020) discuss the importance of “working with the grain” of existing knowledge systems to enhance productivity without undermining local institutions. Mills et al., (2021) also highlight the role of farmer-to-farmer mentoring, which often functions within extended kinship or communal structures. When M&E frameworks are designed to capture and reinforce these culturally grounded efficiencies, they can support higher yields and more effective resource use without alienating the very people they aim to help.

Finally, cultural norms deeply shape how communities perceive and manage agricultural risks, which in turn influences the sustainability of interventions. In many cultures, risk is not just a personal or economic concept but a communal concern addressed through collective action, ritual, and shared decision-making. Marengo et al., (2022) show that risk mitigation strategies are more successful when they align with local governance structures, such as water user associations or informal seed-sharing networks. Hazell & Varangis, (2020) find that external insurance schemes often fail when they bypass these informal systems. M&E efforts that ignore the cultural roots of risk management tend to overestimate the willingness of farmers to adopt unfamiliar tools. In contrast, culturally attuned M&E can identify, validate, and even scale up traditional coping mechanisms, enhancing long-term resilience to climate and market shocks.

2.6 Summary of the literature

The literature review sets the foundation of the study in two theories, Sustainability Theory and Systems Theory. Sustainability Theory offers a framework to comprehend the ability of agricultural support groups to sustain themselves by striking an equilibrium between economic viability, social equity, environmental protection, and institutional resilience. It focuses on intergenerational responsibility, systems thinking, participation and adaptability,

and it views M&E as a learning process, rather than a reporting process, for long-term viability. Systems Theory is a complimentary approach that sees agricultural groups as complex, interdependent systems requiring feedback loops to maintain balance, adapt to disturbance and realize their goals. These theories combine to place M&E as a fundamental and integrated tool for sustainability of such groups in the long-term.

This review then looks at the four pillars of M&E practices: Planning, Data collection, Reporting, Use of findings. Good planning is considered context sensitive, inclusive and participatory. Digital technologies, including mobile telephones and drones, are increasingly used to enhance data collection, but require capacity building and equitable access. Reports are most effective when they are timely, local, and action-oriented, and when they are not the traditional bureaucratic, donor-centred report but are utilised in alternative formats such as community meetings and using visual tools. A weak feedback loop was identified as the most underutilized phase, and the use of findings for adaptive management was identified as a weak link, where M&E became an administrative formality rather than a tool for improvement.

Agricultural support groups are analyzed in four aspects: economic, social, environmental, and institutional. Groups are disadvantaged in terms of systemic barriers and yet benefit from collective action, risk sharing and market access. Socially, they engage in trust and resilience building, but the social aspect of it is not always given attention in assessing frameworks. Groups encourage sustainable practices; however, in terms of their environment, there is a lack of knowledge and low incentives. At an institutional level, institutional performance and accountability are important for long-term survival, as well as strong governance and policy coherence. These four pillars are interdependent and need to be implemented together and as a whole, as the review emphasizes. The connections between M&E practices and sustainability are also linked directly in the literature, ranging from enhancing resilience, accountability and adaptive learning during the planning phase through to the use of the data. Lastly, it discusses how cultural practices make a significant difference in this relationship, affecting every aspect of M&E, ranging from planning and data collection to reporting and use of results.

Although there is a lot of existing literature relating to M&E, sustainability and Culture, there are some gaps in Research. First, while the theoretical link between M&E and sustainability is well-established, there is limited empirical research that specifically examines how the

distinct components of M&E practices (planning, data collection, reporting, and utilization) collectively contribute to the multi-dimensional sustainability (economic, social, environmental, and institutional) of agricultural support groups in a post-conflict, rural African context like Nwoya District. Second, although the literature has widely acknowledged the role of cultural practices in development, there are fewer studies that analyze how certain cultural norms—including communal labour systems, oral history and traditional risk-sharing mechanisms—can directly impact the effectiveness of formal monitoring and evaluation systems and, ultimately, the sustainability of agricultural groups. This study thus aimed to fill these gaps by examining the effect of M&E practices on the sustainability of the agricultural support groups in Nwoya District with a particular emphasis on the moderating role of cultural practices.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter provides an overview of the methods that were used to conduct the study. It focuses on the research design, study area, population, sample size determination, sampling technique, sampling procedures, data collection methods, data collection tools, data collection procedure, study variables, quality control, data analysis and presentation, ethical considerations, study limitations, and dissemination of the results. These topics are discussed in detail in the following sections.

3.1 Research Design

The research design used in this study was descriptive research. Creswell & Creswell (2018) stated that descriptive research is a type of research that describes a phenomenon as it is in its natural environment without intervening with the phenomenon. The descriptive design was selected because it enables the researcher to describe the practices of M&E and sustainability of agricultural support groups in Nwoya District as they exist in nature. In this design, both the depth and breadth of the phenomenon of interest were captured, providing a comprehensive description of the phenomenon studied. This study involved the three non-governments organizations (NGO) and beneficiaries they serve namely Dyere Tek, Capable Uganda and CARE International.

The research approach used was mixed methods which is a systematic combination of qualitative and quantitative research that is conducted in a single research study (Creswell & Creswell, 2018). Specifically, the study employed a convergent mixed-methods design where both qualitative and quantitative data were collected and analyzed at the same time then synthesized with each other to give a comprehensive picture of the research problem. The advantage of a mixed methods approach is that it can verify results from multiple sources and/or analysis methods, which can strengthen the credibility and valid of the study's findings (Johnson et al., 2017). This is especially suitable since community development efforts are likely to include many organizational parties, environmental and other factors, and differing viewpoints (Greene et al., 1989). The combination of qualitative and quantitative methods

allowed for rich insights to be gained in terms of experiences and perceptions, as well as practices, of the different actors to the M&E and sustainability processes.

3.2 Study Area

The study area was Nwoya District, it was selected as the study site due to its unique characteristics and pressing need for effective agricultural groups. Located in northern Uganda, Nwoya has experienced significant socioeconomic challenges stemming from decades of conflict and underdevelopment (World Bank Group, 2019). As such, numerous local and international NGOs have been involved in delivering projects aimed at improving living conditions and promoting sustainable development. However, there remains limited knowledge about the effectiveness, impact and sustainability of these initiatives within the district. Therefore, investigating M&E practices and sustainability in this context holds practical implications for policymakers, practitioners, and communities alike.

3.3 Population

The study population consisted of agricultural support groups members and agricultural officers in Nwoya District involved in agricultural interventions. The study was conducted on the agricultural groups supported by three non-governmental organizations (NGOs) namely Dyere Tek, Capable Uganda and CARE International. As per the District Community Development Officer, Nwoya District (personal communication July 5, 2025), the three organizations catered to 20 agricultural groups in the district.

The target population comprised farmers that belonged to supported agricultural groups and had received at least one intervention (agricultural inputs, training, financial grants, technical assistance). These farmers shared their knowledge about the role of monitoring and evaluation for the sustainability of agricultural support groups. Key informants from the three NGOs, local government institutions and agricultural group leaders were also included who had relevant knowledge of the planning, implementation, monitoring and sustainability of agricultural interventions. An estimated total population of 160 members of agricultural groups and 7 key informants was considered in the study. Population distribution was used as a basis in determining a manageable sample which would be representative enough across the various categories of respondents.

3.4 Sample Size

The Krejcie & Morgan (1970) sample size determination table was used to determine the sample size of 113 respondents from the target population of 160. The respondents included agricultural group members and key informants who had relevant information relating to agricultural support interventions in Nwoya District. A total of 113 members of agricultural groups and also 7 key informants were included in the sample. The agricultural group members shared information about their experiences in monitoring and evaluation and sustainability of agricultural supports groups. Additional information was provided by the key informants on the implementation, monitoring and continuity of the agricultural interventions in the district.

Table 3. 1: Sample size distribution of respondents

Category of respondents	Target population	Sample size
Agricultural group members supported by Capable Uganda	80	56
Agricultural group members supported by CARE International	40	28
Agricultural group members supported by Dyere Tek	40	29
Total agricultural group members	160	113
Key informants from NGOs, local government, and agricultural group leadership	7	7
Total	167	120

Source: Researcher's estimates based on the study population and Krejcie and Morgan (1970).

3.5 Sampling techniques

The study employed both probability and non-probability sampling techniques to ensure a balance between statistical representativeness and in-depth qualitative insight. This mixed approach allowed for the generalization of survey results while capturing specialized knowledge from key stakeholders (Adekeye & Apeh, 2019; Rahman, 2023).

3.5.1 Probability Sampling Techniques

Stratified sampling was used to divide members of agricultural support groups into distinct subgroups according to the non-governmental organizations supporting them, namely Capable Uganda, CARE International, and Dyere Tek. This approach enabled the study to

consider the different experiences of agricultural groups supported by the three organizations. The sample of agricultural group members was distributed across the respective organizations to ensure their representation in the study.

3.5.1.1 Simple Random Sampling

Simple random sampling was used to select agricultural group members from the identified groups in Alero Sub County, Nwoya District. This technique gave eligible members an equal chance of being selected, thereby reducing potential selection bias and promoting fair representation (Adekeye & Apeh, 2019). The study covered approximately 20 agricultural groups supported by the three NGOs, with an average membership of about eight (8) members per group. The technique enabled the researcher to select respondents from the available membership while capturing the experiences of both male and female farmers regarding monitoring and evaluation practices and group sustainability.

For respondents with limited literacy skills, the researcher administered the questionnaires verbally in the local language and recorded their responses using a five-point Likert scale. This approach enabled respondents to understand the questions and express their views clearly, promoting inclusive participation and consistency in data collection.

3.5.2 Non-Probability Sampling Techniques

Non-probability sampling techniques refer to methods in which not all individuals in the population have a known or equal chance of being selected. These techniques are largely based on the subjective judgment of the researcher rather than random selection, making them particularly useful in exploratory or qualitative research contexts. Although non-probability sampling is often more practical and cost-effective, it is associated with a higher potential for selection bias and reduced generalizability of results (Stratton, 2023).

In the context of this study, non-probability sampling was appropriate as it enabled the purposeful selection of participants who are directly engaged the project. This targeted approach is advantageous for capturing detailed, context-specific insights, especially from smallholder farmers whose lived experiences are central to understanding resilience outcomes. As Rahman, (2023) emphasizes, such techniques are particularly valuable when the research aims to explore complex social phenomena where depth of information is prioritized over representativeness.

3.5.2.1 Purposive sampling

The study utilized purposive sampling because of its ability to provide the researcher with a sample of participants who have specialized knowledge of, and experience with, the design, monitoring and sustainability of agricultural interventions (Rahman, 2023). While random sampling focuses on the representativeness of the sample, purposive sampling focuses on the richness and depth of information, which can be especially appropriate for gaining expert information from individuals who have unique experiences and perspectives from which to comment on the phenomenon being studied. This technique was used with two different groups: Key Informant Interviews (KIIs) and leaders of agricultural groups. A total of nine key informants were selected comprising three representatives from the government, three representatives from the NGO (one from Capable Uganda, one from CARE and the third from Dyere Tek) and three leaders of agricultural groups. These participants were selected because their work roles and responsibilities had them at the heart of design, implementation and sustainability decision making for M&E, which allowed for a range of institutional experiences to be captured. The purposive selection of these key informants was therefore critical in the drawing of credible and context rich data to enable triangulation with the simple random sampling of the farmer respondents.

3.6 Data Collection Methods

The study used mainly primary data collection methods. The primary data was gathered using questionnaires, interviews and focus group discussions. These methods provided distinct benefits since they could be used to obtain each different type of information from different groups of respondents.

3.6.1 Questionnaires

A researcher-administered questionnaire was employed to gather data from farmers who had received support from NGOs. For those who were not literate, the questions were read out to them in the local language, and the answers were written on a 5-point Likert scale. This method resulted in uniformity of responses and facilitated analysis and interpretation of data.

3.6.2 Interviews

Semi-structured interviews were also held with key informants including NGO staff, government officials and group leaders. This approach enabled a more in-depth analysis of personal experiences, perceptions and insights related to M&E practices and sustainability (Rubin & Rubin, 2012). The flexible nature of the interview format enabled the researcher to clarify responses, follow up and build on emerging issues and to collect rich qualitative data that could not have been obtained by using structured interview questions alone (Kvale & Brinkmann, 2009).

3.6.3 Focus Group Discussions

Focus Group Discussions (FGDs) were used as a data collection method for this research. This approach was especially appropriate for this research because it involved gathering elaborate qualitative data from an interactive and dynamic group process. Three focus groups were held, one per NGO. The size of each group was ten participants, within the range of the planned number of 6-12 participants, all with first-hand experience of the data collection process. The size of the group was determined to provide a cross section of views and a manageable atmosphere for in-depth discussion.

3.7 Data Collection Tools

Three instruments were employed in the study; a structured questionnaire, a semi-structured interview guide and a focus group discussion guide. The unit of analysis was the individual, in this case, farmers who were members of agricultural groups backed by non-governmental organizations.

3.7.1 Structured Questionnaire

The questionnaire aimed to gather data on demographic data and variables pertinent to M&E practices and sustainability. It comprised several scales for planning, data collection, reporting and use of M&E findings, plus indicators of sustainability (measured with a sustainability index on economic, social, environmental and institutional sustainability). The constructs were adapted from previous research to ensure their validity and reliability (DeVellis, 2017).

3.7.2 Interview Guide

The interview guide was structured to address the study's principal research questions and thematic areas included program design, M&E processes, cultural factors and group sustainability. The guide was structured to cover all the essential issues, but was open for discussion and new ideas came up during the process (Fontana & Frey, 2000). The open-ended prompts invited the participants to provide their experiences, challenges, and recommendations in their own words.

3.7.3 Focus group discussion guide

An open-ended focus group discussion guide was developed to guide the discussion and not be so scripted that it limits the topics that could be covered. Participants were selected from a small, diverse group of 6-10 people directly with the goal of having a wide range of perspectives. The session was conducted by a trained moderator in a comfortable and neutral environment. The moderator opened the session, set the rules and ensured everyone had a chance to speak, without one person taking over the discussion. The session was audio-recorded with consent to ensure that all communication was recorded and a note-taker was present to record any non-verbal communications and key themes as they occurred. Lastly, the audio recordings were transcribed and the research team used thematic analysis to detect patterns, feelings and experiences. The use of this qualitative approach gave a detailed and rich understanding of the difficulties and success of the data collection from the participants' perspective.

3.8 Validity and Reliability

This study took deliberate steps to ensure that the research instruments used the questionnaires and interview guides were both valid and reliable. These two aspects were essential for producing credible, accurate, and dependable data.

3.8.1 Validity of the Instruments

Validity referred to the extent to which an instrument accurately measured what it was intended to measure (American Psychological Association, 2014). To enhance content validity, the questionnaire and interview guide were carefully reviewed to ensure they were comprehensive, relevant, and aligned with the study's objectives and research questions. This

review was carried out in consultation with subject matter experts in the field of M&E, sustainable agriculture, and academic research. Their feedback helped refine the structure, wording, and coverage of the instruments, ensuring that all key concepts such as planning, data collection, reporting, use of M&E findings, and aspects of sustainability were appropriately captured.

In addition, the instruments were pre-tested with a small group of respondents similar to the target population. This pilot phase helped to identify unclear items, measure comprehension, and assess the appropriateness of question flow and response scales. Necessary adjustments were made before full data collection began.

3.8.2 Reliability of the Instruments

Reliability refers to the consistency and stability of a measurement instrument in producing results under consistent conditions (Carmines & Zeller, 1979). In this study, internal consistency reliability was assessed using Cronbach's alpha to determine the extent to which items within the structured questionnaire consistently measured the intended constructs.

During the pilot study, responses obtained from the structured questionnaire were entered and analysed using the Statistical Package for the Social Sciences (SPSS). Cronbach's alpha was calculated for the relevant multi item scales covering monitoring and evaluation (M&E) practices, including planning, data collection, reporting, and utilisation of findings, as well as sustainability dimensions, namely economic, social, environmental, and institutional sustainability.

The reliability analysis produced a Cronbach's alpha coefficient of 0.951 for the 55 items tested, as presented in Table 3.2. This value indicates excellent internal consistency, suggesting that the questionnaire items were highly consistent in measuring the intended constructs. Therefore, the instrument demonstrated a high level of reliability and was considered suitable for data collection in the main study.

Table 3. 2: Reliability Statistics

Cronbach's Alpha	Number of Items
0.951	55

Source: Pilot study data (2025).

3.9 Methods of Data Analysis

This study integrated both quantitative and qualitative approaches to offer a comprehensive understanding of how M&E practices influenced the sustainability of supported agricultural groups in Nwoya District. Quantitative data were analyzed using Excel and Statistical Package for Social Scientist (SPSS) Version 15, while qualitative data gathered through interviews and focus group discussions were analyzed thematically. The integration of these methods allowed for triangulation of findings, meaning the results from the two strands were compared and interpreted together to provide deeper insights and enhanced the validity of the conclusions.

To address the first objective, which was to assess the level of M&E practices among supported agricultural groups, frequencies and percentages were used. The M&E practices of planning, data collection, reporting, and use of findings were measured using Likert-scale items.

For the second objective, which sought to assess the level of sustainability among the groups, a Sustainability Index was developed. This index was based on key dimensions of sustainability which included economic, social, environmental, and institutional. Each response was assigned a numerical value as follows: Strongly Disagree (SD) = 1, Disagree (D) = 2, Not Sure (NS) = 3, Agree (A) = 4, Strongly Agree (SA) = 5. Each of these dimensions was measured using multiple Likert-scale items. An overall sustainability score was then calculated by averaging the sub-scores. Scores were interpreted using predetermined thresholds: 1.00–2.49 as low sustainability, 2.50–3.49 as moderate, and 3.50–5.00 as high. The results were presented using tables and graphs to provide a visual understanding of the sustainability levels among the supported groups.

To address the third objective, which explored the relationship between M&E practices and the sustainability of agricultural groups, inferential statistical methods were used. Pearson's correlation analysis was conducted to determine the strength and direction of the relationship between each M&E practice. Following this, a multiple linear regression analysis was carried out to assess the extent to which M&E practices predicted sustainability.

The fourth objective aimed to evaluate the moderating effect of cultural practices on the relationship between M&E practices and sustainability. M&E practices were entered as the

independent variables. Second, cultural practices were introduced as a potential moderator. Third, an interaction term (M&E times cultural practices) was added to the model. All variables were mean-centered before creating interaction terms to reduce multicollinearity. A statistically significant interaction term and an increase in the Rsquared value indicated that cultural practices moderated the relationship between M&E and sustainability.

Qualitative data collected through key informant interviews and focus group discussions were analyzed thematically. The process involved transcribing interviews, coding responses, and identifying recurring themes related to M&E practices, sustainability, and cultural practices. These themes were then integrated with the quantitative findings through a process of triangulation. For example, if the survey results showed limited use of M&E findings, interview data helped explain why, perhaps due to lack of training, resistance, or resource limitations. These qualitative insights were used to reinforce or explain the statistical results and were presented alongside the quantitative findings to provide a fuller picture of the factors influencing the sustainability of supported agricultural groups in Nwoya District.

3.10 Ethical Considerations

To ensure the rights, privacy and welfare of the participants in a study, the following ethical principles were observed:

Each participant was told about the purpose and objectives of the study, the procedures involved, their rights as a participant in the study, and the possible risks and benefits to participation. Participants gave written informed consent prior to data collection. It was also explained to the participants that they had the option of asking questions about any part of the study before agreeing to participate.

All of the information gathered in the study was kept confidential and only given to those who had authorised access to them as members of the research team. Participants' names and other identifying information has been omitted from the research report and coded if necessary to ensure anonymity. The data have been reported anonymously.

Participants provided informed consent. Participants could refuse to participate in the study or withdraw from it at any time without penalty, discrimination, or other detrimental

consequences. No one was forced to make any decision or act in any way to participate in this research.

All data collected during the study were securely stored and protected from authorised access, loss or disclosure. Electronic data were stored in password protected files and hard copy documents were kept in secure areas with access only by authorised research team members. The data were processed only for the purposes of the research and in compliance with the data protection requirements applicable to this.

Ethical approval was obtained from the appropriate research ethics committee or review body before data collection began. Appropriate local authorities and institutions were also contacted in relevant cases for permission to access the study participants. The research was carried out in an ethical manner and according to the standards of research.

The researcher ensured that participation was voluntary, and participants were free to withdraw from the study at any time. The study sought ethical approval from the relevant review board or ethics committee before the commencement of data collection.

3.11 Possible study limitations and delimitation

Anticipating potential pitfalls enabled the development of proactive mitigation strategies, thereby enhancing the authenticity and utility of research findings. Despite careful planning and execution, this study faced certain limitations, particularly during the data collection process. One anticipated challenge was the language barrier, as the researcher was not fluent in the local language. To address this, trained interpreters were engaged to facilitate clear communication with participants.

The accessibility of Key Informant Interviewees (KIIs), given their busy schedules was a limitation, whereas the focus group discussions were concluded in 2 weeks, Key informant interviews took over a month to be concluded, due to the busy schedules of the key informants. This affected the timely scheduling of interviews with NGO staff, government staff, and group leaders. To mitigate this, the researcher established early agreements on availability and remained flexible by exploring alternative times to meet, she followed them up with phone calls and did reach out to some of them.

CHAPTER FOUR

ANALYSIS, PRESENTATION AND INTERPRETATION OF RESULTS

4.0 Introduction

This chapter presents the findings and analysis of the data collected from the field. The study aimed to examine the influence of monitoring and evaluation (M&E) practices on the sustainability of supported agricultural groups in Nwoya District, Northern Uganda. To provide a comprehensive understanding of this relationship, the findings are organized according to the specific research objectives, relating to level of M&E practices, level of sustainability, M&E practices and sustainability and the moderating role of culture. The results are presented using descriptive statistics, including frequencies and percentages, alongside qualitative narratives to provide a balanced view of the research problem.

4.1 Response Rate

Category	Frequency	Percentage (%)
Respondents reached	96	85
Respondents not reached	17	15
Total targeted sample	113	100.0

Source: Primary data, 2026.

The study achieved an 85% response rate, with 96 of the 113 targeted respondents participating. The remaining 17 respondents (15%) were not reached. This response rate indicates that the study obtained responses from the majority of the targeted sample, providing a substantial basis for analysing the relationship between monitoring and evaluation practices and the sustainability of agricultural support groups in Nwoya District.

4.2 Demographic information

This section presents the demographic profile of respondents in terms of age, sex, marital status, and highest level of education. Understanding the demographic composition helps contextualize the findings and provides insight into the diversity and representativeness of the study population.

Table 4. 1: Demographic information

Characteristics	Category	Frequency	Percent
Age bracket	Under 18	3	3.2
	18-24	6	6.3
	25-34	23	24.2
	35-44	24	25.3
	45-54	23	24.2
	55-64	10	10.5
	65 or older	6	6.3
Sex	Male	51	53.1
	Female	45	46.9
Marital status	Single, never married	11	11.5
	Married	72	75
	Divorced	4	4.2
	Separated	3	3.1
	Widowed	6	6.3
Highest level of education	Primary School	31	32.3
	Secondary School	13	13.5
	Ordinary certificate	44	45.8
	Diploma	8	8.3

Source: Primary Data, 2025

Table 4.1 shows that in terms of age, the respondents were fairly distributed across different age categories. The majority of respondents were between 25 and 54 years, with 24.2% aged 25–34, 25.3% aged 35–44, and another 24.2% aged 45–54. Those under 18 and above 65 constituted the smallest groups at 3.2% and 6.3%, respectively. This suggests that agricultural group activities are primarily supported and participated in by middle-aged adults, who are typically economically active and experienced in farming or group management,

The table further provides information on sex; out of the 96 respondents, 53.1% were male and 46.9% were female, indicating a slightly higher male participation in agricultural support groups. However, the nearly equal distribution also suggests that women are actively involved in group activities, reflecting inclusive participation.

In terms of education, table 4.1 shows that respondents exhibited varied educational backgrounds, with the largest group having ordinary certificate level education (45.8%), followed by Primary School (32.3%), Secondary School (13.5%), and Diploma (8.3%). This suggests that most participants have basic to intermediate literacy and skills, which may facilitate participation in group planning, training, and adoption of modern agricultural practices.

Therefore, the demographic profile indicates that the agricultural support groups in Nwoya District are composed mainly of middle-aged, married adults, with slightly more males than females, and with most respondents having ordinary certificate-level or primary education. These characteristics are important as they shape the groups' capacity to adopt innovations, participate in decision-making, and sustain agricultural interventions.

4.3 Monitoring and Evaluation practices

This section presents the findings for the first research objective, which was to assess the level of M&E practices of supported agricultural groups in Nwoya District. The analysis focuses specifically on the planning. By examining how members engage in enterprise selection, objective setting, and resource allocation, this section evaluates the extent to which monitoring and evaluation processes are inclusive and collaborative. The table below provides a statistical breakdown of respondents' views on these practices.

4.3.1 Planning

Table 4. 2: Planning

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA
		%	%	%	%	%	%	%
1.	All group members participate in selection of enterprises e.g maize, beans, poultry	4.2	12.5	16.7	14.6	52.1	16.7	68.8
2.	All group members participate in the formation of objectives	0.0	7.3	7.3	16.7	49.0	27.1	76.1
3.	All members (women, youth groups, men, elders considered) voices are respected during objective development	6.3	7.3	13.6	17.7	47.9	20.8	68.7
4.	All group members participate in resources allocation (land, human capital, finances)	4.2	6.3	10.5	8.3	65.6	15.6	81.2
5.	During planning, challenges, management strategies are discussed	5.2	9.4	14.6	18.8	37.5	29.2	66.7
6.	During planning data collection data strategies are discussed	4.2	3.1	7.3	15.6	56.3	20.8	77.1
	Average	4.0	7.7	11.7	15.3	51.4	21.7	73.1

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree

Source: Primary Data, 2025

As presented in table 4.2, the study revealed that participation in planning and decision-making is generally high among agricultural support groups, with an overall average

agreement of 73.1%. This suggests that members are actively involved in shaping group activities, which enhances ownership, accountability, and the likelihood of project sustainability.

While, 68.8% of respondents agreed that all members participate in selecting enterprises, indicating a moderate-to-high inclusivity in determining group priorities, 76.1% agreed that all members contribute to forming group objectives, highlighting that participatory planning is a key feature of group management. 68.7% of respondents confirmed that voices of women, youth, men, and elders are respected during objective development. This demonstrates attention to equitable participation across demographic categories 81.2% agreed that all members participate in allocating land, finances, and human capital, reflecting transparent and inclusive decision-making regarding critical resources and round 66.7% agreed that management challenges and strategies are discussed during planning, while 77.1% indicated that data collection strategies are discussed. These results suggest that planning sessions are participatory and informed by data, which can enhance efficiency and project responsiveness.

The relatively low disagreement (11.7%) and moderate neutrality (15.3%) further confirm that most group members perceive decision-making as inclusive and participatory, although there may still be some variability in engagement across specific activities.

Qualitative data confirms that planning is season-based and crop-calendar-aligned. Respondent one, emphasizes that monitoring efforts are important in the critical stages like land preparation, weeding, harvesting, and marketing. He said, *"Basically, you know, farmer group, they do the activity based on the season... But also, the crop calendar... That's when we synchronize our monitoring."*

4.3.2 Data collection

This section presents the findings regarding data collection and sustainability of agricultural projects. Data collection is a foundational element of effective monitoring and evaluation, as it provides the raw evidence required for informed decision-making and accountability. The analysis in Table 4.3 evaluates these practices based on consistency, collaboration, timeliness, storage, and the adequacy of training and resources.

Table 4. 3: Data collection

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA
		%	%	%	%	%	%	%
1.	Data is consistently collected for our group	4.2	10.4	14.6	21.9	53.1	10.4	63.5
2.	The schedule for data collection is agreed upon by the group	7.3	9.4	16.7	17.7	49	16.7	65.7
3.	Data collection is timely	5.2	17.7	22.9	12.5	46.9	17.7	64.6
4.	Data is stored where members feel is safe e.g phones, books	2.1	6.3	8.4	15.6	54.2	21.9	76.1
5.	Data collectors are trained on the data collection process often	4.2	16.7	20.9	12.5	55.2	11.5	66.7
6.	Adequate resources are provided to support effective data collection.	8.3	10.4	18.7	14.6	52.1	14.6	66.7
	Average	5.2	11.8	17.0	15.8	51.8	15.5	67.2

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree

Source: Primary Data, 2025

From table 4.3 above, the results indicate that data collection practices within agricultural support groups are alittle well-established, with an overall average agreement of 67.2%. This suggests that over 50% of members perceive data collection as consistent, systematic, and adequately supported.

63.5% of respondents reported that data is consistently collected, while 65.7% agreed that data collection schedules are agreed upon by the group. This indicates that data collection is to some extent organized and planned collaboratively, which fosters accountability and reliability of information. 64.6% of respondents indicated that data is collected in a timely manner. While generally positive, this shows a slight gap in ensuring all data is captured promptly, which is important for effective monitoring and decision-making. A relatively high proportion (76.1%) agreed that data is stored safely in locations accessible to members, such as phones or notebooks. This reflects good data management practices, enhancing trust and accessibility. 66.7% agreed that data collectors are adequately trained, and the same proportion confirmed that resources are provided to support data collection. This demonstrates that capacity-building and logistical support are adequately prioritized, although there may be room to improve training frequency or resource allocation.

The relatively low disagreement (17.0%) and moderate neutrality (15.8%) indicate that most respondents view data collection as structured and functional, though minor inconsistencies

or challenges may still exist Key data points Qualitative data revealed that data collection is focused on agronomic practices and output data is primarily collected on hard copy and that the Agricultural officers or production staff is responsible for gathering and keeping this data.

R1 Noted that

"we monitor the acreage open, when was it planted, the management practices... Have they put the pesticide? Basically, those are the information." and Wokorach (R): "So, basically, we collect on a hard copy. And who is responsible for gathering and keeping this information... the agricultural officers..."

This confirms the literature's description of traditional methods (Quandt et al., 2020) but also suggests a gap in adopting advanced digital tools mentioned in the literature (Hassan et al., 2021).

4.3.3 Reporting

This section presents the findings regarding reporting within agricultural groups. Effective reporting serves as the bridge between data collection and actionable decision-making, ensuring that stakeholders at various levels are informed of progress and challenges. The findings from Table 4.4 evaluate the reporting systems based on structure, clarity, and the timeliness of information sharing.

Table 4. 4: Reporting

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA
		%	%	%	%	%	%	%
1.	There is a structured way of reporting in our group	4.2	12.5	16.7	14.6	56.3	12.5	68.8
2.	Specific members are assigned to generate reports	8.3	6.3	14.6	14.6	58.3	12.5	70.8
3.	Reports are clear in content	5.2	6.3	11.5	16.7	51.0	20.8	71.8
4.	Reports are generated timely	8.3	11.5	19.8	14.6	53.1	12.5	65.6
5.	Reports are shared timely with group members and other stakeholders	6.3	14.6	20.9	12.5	46.9	19.8	66.7
6.	We all understand the nature of reports we have	4.2	8.3	12.5	16.7	57.3	13.5	70.8
	Average	6.1	9.9	16.0	15.0	53.8	15.3	69.1

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree

Source: Primary Data, 2025

The findings in table 4.4 above indicate that reporting practices in the agricultural support groups are generally established, with an overall agreement of 69.1% among respondents. 68.8% of respondents agreed that there is a structured reporting system, suggesting that reports are organized according to defined processes and formats, 70.8% reported that specific members are designated to generate reports, highlighting role clarity and accountability within the group, 71.8% of respondents agreed that reports are clear, and 70.8% indicated that all members understand the content. This shows that reporting is comprehensible and accessible, facilitating effective decision-making, while 65.6% indicated that reports are generated on time and 66.7% agreed that reports are shared promptly with members and stakeholders, there is some scope for improvement to ensure full compliance with reporting schedules.

The relatively low disagreement (16%) and moderate neutrality (15%) suggest that most group members perceive reporting as a functional and integral part of M&E practices, although minor challenges in timing or comprehension may exist.

Data from key informant interviews revealed that data leads to the generation of reports presented to the relevant offices like Sub-County Technical Planning Committee (comprising the agricultural officer, Community development offices among others, and this is used for making decisions. One respondent said, : *"we present those data in the sub-county technical planning committee... Now, based on those data, they are able to say, you know, why has this group A maybe sold this quantity?.."* the data therefore generated information for informed decision.

4.3.4 Data sharing and utilization

This section explores how information is shared and utilized within agricultural support groups. Data sharing and utilization represent the final and most critical stage of the M&E cycle; information only gains value when it is moved from records into the hands of those who can act upon it. The findings in Table 4.5 assess this through the lenses of scheduled communication, member engagement, and the translation of data into evidence-based decisions.

Table 4. 5: Data sharing and utilization

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA
		%	%	%	%	%	%	%
1.	The group has planned data sharing moments	3.1	10.4	13.5	15.6	58.3	12.5	70.8
2.	Group members demand for data sharing and utilization	3.1	20.8	23.9	7.3	47.9	20.8	68.7
3.	It is mandatory to share data after its collected	11.5	10.4	21.9	15.6	47.9	14.6	62.5
4.	Data is always used for decision making	9.4	7.3	16.7	17.7	47.9	17.7	65.6
5.	We always go for learning visits as a group	4.2	9.4	13.6	11.5	58.3	16.7	75.0
6.	Our leadership support data sharing and utilization.	6.3	10.4	16.7	13.5	51.0	18.8	69.8
	Average	6.3	11.5	17.7	13.5	51.9	16.9	68.7

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree

Source: Primary Data, 2025

The findings in table 4.5 indicate that data sharing and utilization are well-established practices, with an overall average agreement of 68.7%. This suggests that more members recognize the importance of sharing and using data to inform group decisions and activities. 70.8% of respondents indicated that the group schedules specific moments for data sharing, demonstrating organized and deliberate communication practices, 68.7% reported that members actively request access to data, suggesting engagement and interest in information for decision-making, 62.5% agreed that sharing of collected data is mandatory, reflecting a moderately strong policy of accountability, though there is slight room for improvement, 65.6% confirmed that data is consistently used in decision-making, emphasizing the role of M&E in guiding evidence-based actions, 75% agreed that groups regularly participate in learning visits, highlighting a commitment to experiential learning and knowledge exchange. 69.8% indicated that leadership actively supports data sharing and utilization, demonstrating institutional backing for transparency and learning.

The relatively low disagreement (17.7%) and moderate neutrality (13.5%) indicate that most members perceive data sharing and utilization as integral to group functioning, though there may be occasional lapses in adherence or enforcement.

4.4 Sustainability

The study sought to assess the level of sustainability among the groups, a Sustainability Index was developed. This index was based on key dimensions of sustainability which included economic, social, environmental, and institutional. Each response was assigned a numerical value as follows: Strongly Disagree (SD) = 1, Disagree (D) = 2, Not Sure (NS) = 3, Agree (A) = 4, Strongly Agree (SA) = 5. Each of these dimensions was measured using multiple Likert-scale items. An overall sustainability score was then calculated by averaging the sub-scores. Scores were interpreted using predetermined thresholds: 1.00–2.49 as low sustainability, 2.50–3.49 as moderate, and 3.50–5.00 as high. The results are presented using tables to provide a visual understanding of the sustainability levels among the supported groups.

4.4.1 Economic sustainability

This section evaluates the economic sustainability of the agricultural support groups. Economic sustainability is a critical indicator of M&E success, as it demonstrates whether support group has helped participants maintain a stable and reliable income, resources within the group are used efficiently, the group's economic practices support long-term financial stability, and whether financial risks are effectively managed.

Table 4. 6: Economic sustainability

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA	ESI
		%	%	%	%	%	%	%	Mean Score (M)
1	The agricultural support group has helped participants maintain a stable and reliable income.	1.0	20.8	21.8	13.5	51.0	13.5	64.5	3.65
2	Resources within the group are used efficiently to maximize production outputs.	3.1	8.3	11.4	9.4	59.4	19.8	79.2	4.02
3	The group provides opportunities for participants to diversify income sources.	6.3	12.5	18.8	14.6	50.0	16.7	66.7	3.66
4	Financial risks are effectively managed through group activities or strategies.	6.3	15.6	21.9	11.5	52.1	14.6	66.7	3.61
5	Participation in the group has led to increased access to markets or buyers.	14.6	17.7	32.3	15.6	38.5	13.5	52.0	3.33
6	The group's economic practices support long-term financial stability.	2.1	8.3	10.4	13.5	56.3	19.8	76.1	4.01
	Average	5.6	13.9	19.4	13.0	51.2	16.3	67.5	3.73

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree, ESI - Economic Sustainability Index

Source: Primary Data, 2025

The results in Table 4.6 indicate that the agricultural support groups in the study area have demonstrated a relatively high level of economic sustainability, with an overall average agreement level of 67.5% across the six indicators. This suggests that the majority of participants recognize tangible and long-term economic benefits from their group membership.

A substantial proportion of respondents (79.2%) agreed that resources within the group are used efficiently to maximize production outputs. This highlights the groups' capacity for efficient resource management, likely through collective input purchase, shared equipment use, or joint labor organization, which enhances productivity and cost-effectiveness.

Similarly, 76.1% of respondents affirmed that their group's economic practices support long-term financial stability, suggesting that the groups have established sustainable income-

generating mechanisms such as savings, value addition, or collective marketing. Furthermore, 66.7% of respondents agreed that the group provides opportunities for members to diversify income sources, reflecting the adaptability and resilience of the groups in managing financial risks.

Regarding income stability, 64.5% of participants agreed that their involvement in agricultural support groups has helped them maintain a stable and reliable income. This implies that through collective action, members can better withstand seasonal or market-related income fluctuations. In the same line, 66.7% agreed that financial risks are effectively managed through group activities or strategies, indicating the existence of informal safety nets or risk-sharing arrangements within the groups.

However, the level of agreement (52.0%) indicates that nearly half of the group agreed that participation in the group has led to increased access to markets or buyers suggests that market linkages remain a challenge for some members. This could be due to limited marketing networks, inadequate infrastructure, or competition in local markets, which may hinder the full realization of economic sustainability.

On the other hand, only a small proportion of respondents (19.4%) disagreed with the presented statements, and 13.0% remained neutral, indicating that while economic gains are notable, not all members may be equally benefiting, possibly due to variations in participation levels, resources, or market exposure.

The economic sustainability index of 3.73 indicates that the supported agricultural groups in Nwoya District demonstrate a relatively high level of economic sustainability. This suggests that the groups have some capacity to sustain their economic activities, generate income and support their operations over time. The finding may reflect members' ability to engage in productive activities and obtain economic benefits from their participation in the groups. However, the score also suggests that economic sustainability is not yet fully achieved, as challenges may remain in areas such as access to capital, savings, market opportunities and the ability to finance group activities independently of external support. Therefore, although the groups appear to be making progress towards economic sustainability, continued efforts are needed to strengthen their financial independence and long-term viability.

Focus group discussions revealed that most groups were proactive in economic risk management and demonstrated a capacity for adaptive management based on performance data. Specifically, both the Dyere and CAPABLE groups made crucial strategic shifts to protect their investments. The CAPABLE group, after analyzing production data, switched successfully from planting low-yielding sunflower to high-yielding groundnut. Similarly, the Dyere group responded to the loss of two chickens by changing the enterprise's location to mitigate future risks. These actions confirm the groups' internal capacity for self-correction and data utilization.

However, the findings also highlight a critical vulnerability in Institutional Autonomy. The CARE group reported a failure to adapt to a predictable environmental risk planting time because their partners supplied seeds "very late to be planted," resulting in low yield due to high sunshine. This illustrates a key weakness: dependence on partner timing and inputs can override the groups' internal planning and risk assessment capabilities. This finding links the observed economic failure directly to a deficiency in Institutional Autonomy, serving as qualitative evidence that confirms the quantitative Institutional Sustainability Index score of M=3.31 (Moderate/Low) for adapting to challenges without external support.

Results of the Focus group discussions revealed that groups successfully employed economic strategies focused on market access, diversification, and financial resilience. It was noted that the choice of group enterprise was driven by economic rationale: while one group supported by Dyeretek chose poultry due to its ready market and quick return; the other supported by Capable Uganda chose bean and groundnut for easy market access.

4.4.2 Social sustainability

This section evaluates the social dimensions of sustainability within the studied groups. Mainly focusing on Group members participation in enterprise selection, decision-making processes and opportunities opportunities form members to share knowledge and learn from one another. The table below shows responses generated

Table 4. 7: Social sustainability

S/ N	Statement	SD	D	SD+D	NS	A	SA	A+SA	SSI
		%	%	%	%	%	%	%	Mean Score (M)
1	All group members participate in the selection of enterprises.	2.1	17.7	19.8	11.5	43.8	25.0	68.8	3.52
3	All members (women, youth groups, men, elders) voices are respected during objective development.	2.1	9.4	11.5	12.5	45.8	30.2	76.0	3.86
4	Group activities have led to improved trust and cooperation among members.	4.2	8.3	12.5	12.5	46.9	28.1	75.0	3.79
5	Decision-making processes within the group are fair and inclusive.	5.2	8.3	13.5	13.5	54.2	18.8	73.0	3.73
6	Members have opportunities to share knowledge and learn from one another.	3.1	8.3	11.4	12.5	59.4	16.7	76.1	3.78
7	The group has strengthened relationships within the wider community.	4.2	6.3	10.5	10.4	50.0	29.2	79.2	3.86
8	The group members can count on each other in case of adversity or hard situations.	1.0	9.4	10.4	7.3	54.2	28.1	82.3	4
	Average	3.1	9.7	12.8	11.5	50.6	25.2	75.8	3.79

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree, SSI - Social Sustainability Index

Source: Primary Data, 2025

From table 4.7 above, findings reveal that agricultural support groups demonstrate a high level of social sustainability, with an overall mean agreement of 75.8%. This indicates that most respondents perceived their groups as socially cohesive, inclusive, and supportive environments that foster trust, participation, and collective learning.

A majority of respondents (82.3%) agreed that group members can count on each other in times of adversity or hardship. This underscores the strong sense of solidarity and mutual support within the groups key indicators of social resilience and cohesion. Similarly, 79.2% agreed that the groups have strengthened relationships within the wider community, suggesting that the benefits of group activities extend beyond members to foster community-level collaboration and collective action.

In addition, 76.1% of respondents noted that members have opportunities to share knowledge and learn from one another, while 75.0% agreed that group activities have improved trust and cooperation among members. These findings highlight the social learning dimension of group

participation, where members engage in knowledge exchange, mentorship, and peer support that enhance both individual and group capacities.

Inclusiveness was also rated highly. About 76.0% of respondents agreed that all members' voices women, youth, men, and elders are respected during objective development, and 73.0% indicated that decision-making processes are fair and inclusive. These responses suggest that the groups practice participatory governance and gender-sensitive approaches, creating a sense of belonging and equality among members.

However, a slightly lower but still positive 68.8% of respondents agreed that all group members participate in the selection of enterprises. This implies that while participation is generally strong, a few members may be less engaged in some decision-making aspects possibly due to time constraints, confidence gaps, or unequal access to information.

Overall, the low percentage of disagreement (12.8%) and neutrality (11.5%) reinforces the conclusion that the majority of members experience strong social bonds and participatory engagement within their groups.

Reflecting on the sustainability index, the table above indicates that the highest score relating to Group activities have led to improved trust and cooperation among members was (M=3.79). Scores for respect for all members' voices (M=3.86) and fair decision-making (M=3.73) confirm that the groups operate with high levels of internal equity and participation, crucial for minimizing internal conflict and maintaining stability.

While all scores are high, the lowest mean (M=3.52) for participation in enterprise selection suggests that ensuring active, deep involvement in complex strategic planning remains a subtle, relative challenge compared to the high success in building general trust and support.

4.4.3 Environmental sustainability

This section evaluates the environmental dimensions of sustainability within the studied groups, looking at aspects of sustainable land and resource management. awareness of climate change and environmental risks among others. Table 4.8 below presents the findings related to environmental sustainability.

Table 4. 8: Environmental sustainability

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA	ESI
		%	%	%	%	%	%	%	Mean Score (M)
1.	The group encourages sustainable land and resource management practices.	6.3	13.5	19.8	15.6	49.0	15.6	64.6	3.54
2.	Activities of the group contribute to reducing negative environmental impacts like soil erosion, deforestation	7.3	10.4	17.7	12.5	55.2	14.6	69.8	3.6
3.	Members adopt practices that conserve soil, water, and biodiversity.	4.2	6.3	10.5	26.0	45.8	17.7	63.5	3.82
4.	The group promotes awareness of climate change and environmental risks.	8.3	11.5	19.8	16.7	49.0	14.6	63.6	3.49
5.	Environmental risks are identified and managed effectively in the group's operations.	7.3	13.5	20.8	20.8	26.0	32.3	58.3	3.63
6.	The group supports the adoption of innovative techniques that improve production and protection of the environment.	20.8	10.4	31.2	8.3	39.6	20.8	60.4	3.3
	Average	9.0	10.9	20.0	16.7	44.1	19.3	63.4	3.56

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree, ESI - Environmental Sustainability Index

Source: Primary Data, 2025

The results in Table 4.8 reveal that respondents generally perceive their agricultural support groups as moderately effective in promoting environmental sustainability, with an overall average agreement of 63.4%. This suggests that while environmental considerations are integrated into group activities, there remains room for improvement in adopting and mainstreaming sustainable environmental practices.

A notable proportion of respondents (69.8%) agreed that group activities contribute to reducing negative environmental impacts such as soil erosion and deforestation. This implies that the groups are implementing environmentally conscious practices, possibly through agroforestry, contour farming, or controlled grazing. Similarly, 64.6% agreed that their groups encourage sustainable land and resource management practices, indicating awareness and partial adoption of responsible resource use.

Furthermore, 63.6% of respondents affirmed that the groups promote awareness of climate change and environmental risks. This shows a growing recognition of climate variability and

the need to integrate climate adaptation into agricultural activities. Likewise, 63.5% noted that *members adopt practices that conserve soil, water, and biodiversity*, reflecting a shift toward eco-friendly agricultural behaviors such as mulching, composting, or tree planting.

However, a smaller proportion of respondents (60.4%) agreed that their groups support the adoption of innovative techniques that improve production and protect the environment, *and only 58.3% felt that* environmental risks are effectively identified and managed in group operations. These relatively lower scores suggest that while environmental awareness is increasing, the practical implementation of advanced or innovative sustainable techniques such as integrated pest management or conservation agriculture remains limited. This may be due to knowledge gaps, inadequate technical support, or limited access to environmentally friendly technologies.

The average disagreement rate of 20.0% and neutrality of 16.7% further indicate that environmental sustainability is not yet fully institutionalized within group practices, highlighting the need for capacity building and continuous sensitization.

The Environmental sustainability index showed that the groups demonstrated a strong performance in foundational conservation practices but revealed key weaknesses in innovation and strategic awareness.

High sustainability range of was noted where ($M = 3.50$), the majority of practices scored highly, demonstrating a strong commitment to direct conservation and risk management. The most successful outcome was the transfer of core conservation techniques to members, reflected by the highest score ($M = 3.82$) recorded for the adoption of practices that conserve soil, water, and biodiversity. Furthermore, the scores for environmental risks are identified and managed ($M = 3.63$) and reducing negative environmental impacts ($M = 3.60$) also scored highly, suggesting effective incorporation of mitigation strategies in daily group work.

Conversely, two critical areas scored in the Moderate Sustainability range ($M < 3.50$), indicating areas of weakness or inconsistency. Awareness of climate change and environmental risks scored 3.49, falling just below the high threshold. This suggests that while members are successfully applying specific conservation techniques, their theoretical understanding or strategic awareness of broader climate risks is lagging. The lowest score, 3.30, was recorded for supporting the adoption of innovative techniques

(production/protection). This finding points to a significant barrier to adopting new, modern, or resource-intensive environmental technologies, potentially due to cost, complexity, or a high degree of disagreement (SD+D was 31.2%) among members regarding their feasibility.

It is important to note that, qualitative data revealed that enterprise selection for CARE was partly based on whether the land supports growing of maize and beans, showing consideration of natural resource limits. Further still the group supported by CARE reported that they planned to buy a water pump to address drought risk (though they failed), indicating an awareness of environmental challenges during planning. While the one supported by Dyere tek, made a decision to use a specific broiler doted chicken breed, suggesting an openness to adopting innovative techniques to maximize production, though the complexity and cost of large-scale environmental technologies remain a quantitative challenge.

4.4.4 Institutional sustainability

This section evaluates the institutional dimensions of sustainability within the studied groups, it looks at internal structures and governance mechanisms that ensure long-term viability. Institutional sustainability is defined by the strength of an organization's policies, the transparency of its leadership, and its capacity to adapt to shifting challenges.

Table 4. 9: Institutional sustainability

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA	Mean Score (M)
		%	%	%	%	%	%	%	
1.	The group has clear rules, policies, and governance structures	2.1	5.2	7.3	12.5	56.3	24.0	80.3	4.08
2.	Leadership within the group is transparent and accountable.	0.0	5.2	5.2	8.3	59.4	27.1	86.5	4.02
3.	Planning, data collection, reporting and utilisation of data help the group identify problems early.	5.2	10.4	15.6	15.6	47.9	20.8	68.7	3.59
4.	The group is able to adapt to challenges without external support.	8.3	21.9	30.2	14.6	39.6	15.6	55.2	3.64
5.	Policies and procedures ensure continuity and long-term viability.	3.1	15.6	18.7	17.7	44.8	18.8	63.6	3.45
6.	The group maintains strong linkages with government, NGOs, or other supporting institutions/individuals.	5.2	19.8	25.0	13.5	45.8	15.6	61.4	3.31
	Average	4.0	13.0	17.0	13.7	49.0	20.3	69.3	3.66

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree

Source: Primary Data, 2025

The findings in Table 4.9 above indicate that the agricultural support groups exhibit a generally strong level of institutional sustainability, with an overall mean agreement rate of 69.3% across all indicators. This implies that most groups have established formal structures, leadership systems, and operational frameworks that promote continuity and organizational stability.

A majority of respondents (86.5%) agreed that *leadership within the group is transparent and accountable*, reflecting a high degree of trust in internal governance mechanisms. Similarly, 80.3% agreed that *their groups have clear rules, policies, and governance structures*, suggesting institutional maturity and the presence of defined operational guidelines that support decision-making, resource allocation, and conflict resolution.

Furthermore, 68.7% of respondents agreed that planning, data collection, reporting, and data utilization help the group identify problems early. This demonstrates that many groups use evidence-based approaches in their management, which enhances responsiveness and strategic planning. However, institutional adaptability appears to be a moderate area of strength, with only 55.2% agreeing that their group can adapt to challenges without external support. *This finding suggests that while internal governance is strong, the groups still rely to some extent on external assistance from NGOs, local governments, or development partners for technical or financial support.*

In addition, 63.6% of respondents agreed that policies and procedures ensure continuity and long-term viability, and 61.4% agreed that their group maintains strong linkages with government, NGOs, and other supporting institutions. These results highlight that while institutional linkages and procedural continuity exist, they may not yet be fully institutionalized across all groups. Strengthening partnerships and embedding institutional learning could enhance long-term sustainability.

The overall low disagreement rate (17.0%) and moderate neutrality (13.7%) reinforce the conclusion that most respondents perceive their groups as institutionally stable and well-governed, though more efforts are needed to reduce external dependency.

The overall institutional sustainability index of 3.66 indicates that the supported agricultural groups in Nwoya District demonstrate a relatively high level of institutional sustainability, assuming a five-point measurement scale. This suggests that the groups have established

some structures and practices that support their continued functioning, including group leadership, member participation, coordination and collective decision-making. However, the score also indicates that institutional sustainability has not been fully achieved, and some groups may still face challenges in maintaining effective leadership, accountability, record-keeping and continuity of activities without external support. The findings therefore suggest that, although the groups have made progress in establishing functional institutional arrangements, further strengthening of their governance systems, management capacity and members' commitment is necessary to enhance their long-term sustainability.

The KIIs confirmed that planning is done through collaboration, communication, and clear roles (R1), and the FGDs showed that all members, including youth and elderly, are assigned specific tasks (e.g., Youth - digging, Elderly - collecting rubbish). This collective ownership is formalized through well-written constitutions and annual certificate renewal (R5), which are crucial elements of Institutional Sustainability.

Data from the qualitative interviews revealed that the groups have committees. They have for instance the production committee, disciplinary committee, loan committee, all those structures are there in place. One respondent added that « *during group strengthening, capacity building, governance here and there, we normally tell them that the functionality of some of those committees should be enhanced...* »

While another said "The main issue that makes a group disintegrate is poor leadership, poor record-keeping." This implies that some social factors lead to failure.

Despite this strong foundation, a critical gap exists in the efficiency of M&E utilization, threatening the institution's ability to adapt swiftly. While groups consistently collect regular, strategic data (weekly/monthly), R5 explicitly identified "Delayed decision making by some members of the group" as the primary challenge in using this information. This finding indicates that the reliance on consensus, while promoting participation, paradoxically acts as a systemic bottleneck. By undermining the timeliness required for M&E findings to translate rapidly into corrective action, this delay compromises the institution's core function as a self-regulating entity capable of effective adaptive management.

The overall findings revealed that supported agricultural groups in Nwoya District demonstrated a generally positive level of sustainability across the economic, social,

environmental, and institutional dimensions. Social sustainability was particularly strong, as members experienced mutual support, trust, cooperation, inclusive participation, and opportunities to share knowledge. These relationships strengthened group cohesion and collective responsibility, which are essential for maintaining agricultural activities over time. Institutional sustainability was also evident through transparent leadership, established governance structures, clear rules, and the use of monitoring and evaluation practices to identify challenges and guide decision making. Economic sustainability was generally positive, with groups demonstrating the ability to use resources efficiently, manage financial risks, diversify income sources, and pursue activities that supported financial stability. However, limited access to markets and buyers remained a challenge, potentially restricting members' ability to maximize the benefits of their agricultural enterprises. Environmental sustainability was comparatively less developed. Although groups demonstrated awareness of environmental conservation and sustainable resource management, the adoption of innovative agricultural techniques and the effective identification and management of environmental risks remained areas requiring improvement.

4.5 Cultural practices

This section presents an analysis of the cultural factors influencing M and E practices and sustainability within the study group. The data captures the intersection between traditional heritage and modern agricultural practices, highlighting how cultural beliefs, customary land rights, and oral traditions continue to shape farming decisions.

To provide a clear picture of these dynamics, respondents' views were gathered using a Likert scale ranging from Strongly Disagree (SD) to Strongly Agree (SA). The findings are summarized in the table below, which reflects a group in transition maintaining deep respect for customary practices while steadily adopting modern methodologies.

Table 4. 10: Cultural practices

S/N	Statement	SD	D	SD+D	NS	A	SA	A+SA
1.	The group has fully shifted from engaging in traditional farming methods to modern methods	17.7	5.2	22.9	19.8	45.8	11.5	57.3
2.	The group respects customary land use and ownership practices.	2.1	10.4	12.5	8.3	59.4	19.8	79.2
3.	Knowledge of indigenous agricultural practices is shared regularly.	2.1	10.4	12.5	10.4	61.5	15.6	77.1
4.	Cultural beliefs no longer affect agricultural practices like, the type of crops grown and timing of planting and harvest.	9.4	11.5	20.9	16.7	50.0	12.5	62.5
5.	The group incorporates cultural practices into training and development.	3.1	25.0	28.1	16.7	40.6	14.6	55.2
6.	Oral traditions are used to pass down farming knowledge.	7.3	17.7	25.0	19.8	39.6	15.6	55.2
	Average	7.0	13.4	20.3	15.3	49.5	14.9	64.4

SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, SA – Strongly Agree

Source: Primary Data, 2025

The findings in the table 4.10 above show that cultural practices continue to play a significant role in shaping agricultural group activities, with an overall average agreement of 64.4%. This suggests a moderate integration of both traditional and modern farming approaches, reflecting a hybrid system of agricultural knowledge and practice among group members.

A large proportion of respondents (79.2%) agreed that their groups respect customary land use and ownership practices, implying that traditional norms governing access to and control over land remain important. This respect for cultural land tenure systems likely fosters harmony and social legitimacy within the community. Similarly, 77.1% of respondents affirmed that knowledge of indigenous agricultural practices is shared regularly, suggesting that traditional farming wisdom such as local soil fertility management or crop rotation is still valued and transferred among members.

Conversely, only 57.3% of respondents agreed that their groups have fully shifted from traditional to modern farming methods. This indicates that although modernization is taking place, many groups still retain elements of traditional agricultural systems, possibly due to cost limitations, risk aversion, or the reliability of indigenous techniques under local conditions. Likewise, moderate agreement levels were recorded for the statements the group

incorporates cultural practices into training and development (55.2%) *and* oral traditions are used to pass down farming knowledge (55.2%), suggesting that while cultural values are acknowledged, they are not yet systematically integrated into formal training sessions or extension programs.

In addition, 62.5% of respondents agreed that cultural beliefs no longer affect agricultural practices such as crop choice and timing of planting or harvesting. This shows that while traditional beliefs still exist, their direct influence on farming decisions is diminishing as modern agricultural knowledge spreads through training, exposure, and collaboration with external actors.

The relatively low disagreement rate (20.3%) and moderate neutrality (15.3%) reflect a transitional phase where both traditional and modern systems coexist, influencing group practices and member attitudes in complementary ways.

The most significant finding from the KIIs concerns the negative moderating effect of cultural practices on the group's participatory ideal. R5 stated that in the Acholi culture, "Men are given key roles in decision making," resulting in women "not being given opportunity to make choices regarding farming." This practice directly undermines the high Social Sustainability scores related to inclusion and equality as seen in the sustainability index ($M=3.86$). It creates a structural barrier that limits the input of a central agricultural labor force (women), thereby reducing the quality of collective decision-making and threatening the group's long-term viability. This validates the final recommendation from R5 to promote gender equality and rights.

4.5 Relationship between M&E practices and sustainability of agricultural supported groups

4.5.1 Relationship between M&E practices and sustainability of agricultural supported groups

The third objective explored the relationship between M&E practices and the sustainability of agricultural groups. To explore the relationship between M&E practices and the sustainability of agricultural groups in Nwoya District. To streamline the analysis, inter-variable correlation was used to aggregate sustainability indicators into a single composite variable. A comprehensive Pearson correlation matrix was then generated to examine the interconnectedness between:

Intervariable correlation was used to compute sustainability to one variable. A Pearson correlation analysis was conducted to examine the relationships among monitoring and evaluation practices (me_practices), cultural practices (cul_practices), and sustainability.

Table 4. 11: Inter variable Correlations

		me_practices	sustainability	cul_practices
me_practices	Pearson Correlation	1	.830**	.451**
	Sig. (2-tailed)		.000	.000
	N	96	96	96
sustainability	Pearson Correlation	.830**	1	.678**
	Sig. (2-tailed)	.000		.000
	N	96	96	96
cul_practices	Pearson Correlation	.451**	.678**	1
	Sig. (2-tailed)	.000	.000	
	N	96	96	96

** . Correlation is significant at the 0.01 level (2-tailed).

Source: Primary Data, 2025

Results from table 4.11 above indicate that all variables are positively and statistically significantly correlated at the 0.01 significance level ($p < 0.01$), implying a significant association among the variables. The results are presented in the table below.

There is a strong positive correlation between monitoring and evaluation practices and sustainability ($r = 0.830$, $p < 0.01$). This implies that improvements in management practices

are associated with higher levels of sustainability. The strength of this relationship suggests that management practices are a major factor linked to sustainability outcomes.

4.5.2 Influence of M&E practices on sustainability of agricultural supported groups

The study used multiple linear regression analysis to examine the extent to which monitoring and evaluation (M&E) practices, namely planning, data collection, reporting, and data sharing and utilisation, influence the sustainability of agricultural supported groups.

Table 4. 12: Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	0.832 ^a	0.693	0.679	1.33565
a. Predictors: (Constant), Data sharing and utilization, Planning, Data Collection, Reporting				

The model summary indicates a multiple correlation coefficient ($R = 0.832$), suggesting a strong positive relationship between the combined M&E practices and the sustainability of agricultural supported groups. The coefficient of determination ($R^2 = 0.693$) shows that the four M&E practices jointly explained 69.3% of the variation in sustainability. The remaining 30.7% may be attributable to other factors not included in the model, such as access to markets, availability of financial resources, leadership capacity, and institutional support. The adjusted R^2 of 0.679 indicates that the model explained approximately 67.9% of the variation in sustainability after adjusting for the number of predictors included. The standard error of the estimate was 1.33565, representing the average prediction error in the units of the sustainability measure.

Table 4. 13: ANOVA Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	365.617	4	91.404	51.236	0.000 ^b
	Residual	162.341	91	1.784		
	Total	527.958	95			

a. Dependent Variable: Sustainability

b. Predictors: (Constant), Data sharing and utilization, Planning, Data Collection, Reporting

The analysis of variance (ANOVA) results indicate that the regression model was statistically significant, ($F(4,91) = 51.236$, $p < 0.001$). The reported significance value of 0.000 in SPSS

should be interpreted as ($p < 0.001$), rather than as an actual probability of zero. This finding suggests that planning, data collection, reporting, and data sharing and utilisation, when considered jointly, significantly predicted the sustainability of agricultural supported groups. Therefore, the four M&E practices collectively provide a statistically significant explanation of differences in sustainability among the groups studied.

Table 4. 14: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.634	0.875		3.009	0.003
	Planning	0.884	0.300	0.241	2.945	0.004
	Data Collection	1.209	0.352	0.347	3.434	0.001
	Reporting	0.294	0.350	0.087	.840	0.403
	Data sharing and utilization	0.900	0.308	0.271	2.922	0.004

a. Dependent Variable: Sustainability

According to the regression coefficients, planning had a positive and statistically significant relationship with sustainability ($B = 0.884$, $p = 0.004$). This implies that a one-unit increase in the planning score was associated with a 0.884-unit increase in the sustainability score, assuming the other M&E practices remained constant. This finding suggests that effective planning, including setting clear objectives, identifying priorities, and allocating resources, is an important predictor of the sustainability of agricultural supported groups.

Data collection had a positive and statistically significant relationship with sustainability ($B = 1.209$, $p = 0.001$). This was the strongest predictor among the four practices based on the standardised beta coefficients. The finding implies that improvements in data collection practices were associated with higher sustainability scores, controlling for the other variables. Systematic data collection may enable agricultural groups to identify their needs, monitor progress, assess performance, and make informed decisions that support their continued operation.

Reporting had a positive but statistically insignificant relationship with sustainability ($B = 0.294$, $p = 0.403$). Although the coefficient suggests a positive association, the result does not provide sufficient statistical evidence that reporting independently predicted sustainability when the other M&E practices were controlled for. This does not necessarily mean reporting

is unimportant. Rather, its contribution may depend on whether the information reported is reviewed, shared, and used to guide decisions and corrective action.

Data sharing and utilisation had a positive and statistically significant relationship with sustainability ($B = 0.900$, $p = 0.004$). This suggests that a one unit increase in the data sharing and utilisation score was associated with a 0.900 unit increase in the sustainability score, holding the other predictors constant. The finding highlights the importance of sharing M&E findings with group members and relevant stakeholders and using the information to improve decision making, accountability, resource management, and organisational performance.

Overall, the findings demonstrate that M&E practices collectively have a strong and statistically significant relationship with the sustainability of agricultural supported groups, explaining 69.3% of the observed variation in sustainability. Among the four practices, data collection made the strongest unique contribution based on the standardised regression coefficients, followed by data sharing and utilisation, planning, and reporting. However, reporting did not make a statistically significant independent contribution to sustainability in the model. These results suggest that the sustainability of agricultural supported groups may be strengthened by establishing effective planning systems, collecting reliable data, and ensuring that M&E findings are shared and used to inform decisions. Although reporting remains an important component of M&E, the findings indicate that reporting alone may not be sufficient to improve sustainability unless the information generated is translated into practical action.

4.6 The moderating effect of cultural practices

This section presents the findings for the final research objective, which was to evaluate the moderating effect of cultural practices on M&E practices and sustainability of supported agricultural groups in Nwoya District

To provide a comprehensive answer to this objective, the study utilized a dual-stage analytical approach. First, data from Table 4.11 was analysed using Pearson's Correlation to establish the foundational linear relationships and directional associations between the variables. Second, the analysis transitioned to the results in Table 4.12, which utilized Moderation Regression Analysis to quantify the interaction effect specifically determining how cultural practices influence M&E practices and sustainability of groups.

Considering the table 4.11 in the previous section, that examined the relationships among monitoring and evaluation practices (me_practices), cultural practices (cul_practices), and sustainability. The results show a relationship between cultural practices and sustainability. Cultural practices have a moderately strong positive correlation with sustainability ($r = 0.678$, $p < 0.01$). This indicates that favorable cultural practices tend to be associated with increased sustainability. Although strong, this relationship is weaker than that observed for monitoring and evaluation practices

Table 4.11 further revealed a moderate positive correlation exists between M& E practices and cultural practices ($r = 0.451$, $p < 0.01$). This suggests that these two independent variables are significantly related but not strongly enough to indicate serious multicollinearity between the two variables.

The significant correlation suggests that as agricultural groups strengthen their cultural practices, there is a corresponding, predictable improvement in their M&E activities. These variables do not operate in isolation but rather reinforce one another.

While the two variables are significantly related, the correlation coefficient of 0.451 falls well below the common threshold for concern (typically 0.70 or 0.80). This confirms that there is no threat of serious multicollinearity, ensuring that both variables can be included in a regression model to independently predict sustainability without distorting the results.

The second consideration was the moderation regression analysis. A moderation regression analysis was conducted to examine whether cultural practices influence the relationship between monitoring and evaluation practices and the sustainability of agricultural support groups. Prior to analysis, the predictor variable (monitoring and evaluation practices) and the moderating variable (cultural practices) were mean-centered to reduce potential multicollinearity and improve interpretation of the interaction term. An interaction variable was then created by multiplying the centered predictor and moderator variables. Multiple linear regression analysis was performed with sustainability as the dependent variable, while monitoring and evaluation practices, cultural practices, and their interaction term were entered as predictors. The results are presented in the tables below.

Table 4. 15: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.903 ^a	0.816	0.810	0.25940	0.816	135.609	3	92	0.000

a. Predictors: (Constant), interaction, centred_me_practices, centred_cul_practices

Refelcting on table 4.12, the regression model explained 81.6% of the variance in sustainability ($R^2 = 0.816$, Adjusted $R^2 = 0.810$). This indicates that monitoring and evaluation practices, cultural practices, and their interaction jointly have strong explanatory power for sustainability among agricultural support groups.

In conclusion, the overall regression model was statistically significant, $F(3,92) = 135.61$, $p < .001$. The study concludes that Monitoring and Evaluation (M&E) practices are the primary drivers of sustainability for agricultural groups in Nwoya District. However, the high R^2 value of 81.6% in the moderation model proves that sustainability is not achieved through technical M&E frameworks alone.

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.0 Introduction

This chapter presents a summary of the research findings, offers conclusions based on the data analyzed in the previous chapter, and provides actionable recommendations. The primary focus of this study was to examine the relationship between Monitoring and Evaluation (M&E) practices and the sustainability of supported agricultural groups in Nwoya District, while specifically accounting for the moderating influence of cultural practices.

5.1 Level of M&E practices of supported agricultural groups

Across the four domains of monitoring and evaluation practice: planning, data collection, reporting, data sharing and utilization, the results on the level of M&E practices of supported agricultural groups show a consistent pattern. Agreement levels are moderately to highly established throughout, suggesting a functional and participatory M&E system at group level, with some identified gaps in timeliness, digitalisation and enforcement. These findings are then discussed with references to the literature cited below.

The extent of participatory planning was high in this study which is consistent with Okafor, 2021 and Owuor, 2020 who stated that stakeholder involvement in planning, especially of M&E objectives and resources allocation is one of the important factors that determine the performance and sustainability of a project. The results from the members that they contribute to the group's goal setting provide support for Kühl et al., (2020) who highlight that a culture of integration is essential in effective monitoring. The focus on equitable participation, manifested in respondents' affirmation of the respect of the voices of women, youth, men and elders, aligns with Huyer & Partey, (2020) who emphasize the need for inclusive decision-making structures to achieve gender equality in climate-resilient agriculture. The comparatively lower score on discussion of management challenges, however, indicates that thinking about problems is not as routine as planning, in general. This somewhat contradicts the argument of Reyes et al., (2020) that the monitoring of traditional agricultural systems needs to be done with continuous reflection on the indicators of conservation and management. This qualitative result of planning on a seasonal basis and crop calendar aligned is similar to what is reported by Nakalembe et al., (2021), who state that the agricultural monitoring system in Africa needs to be temporally synchronized with

crop phenology to be effective. This is a seasonal synchronicity of M&E that could reduce reflective planning frequency, but is a contextual adaptation of M&E.

Data collection is the lowest of the four domains, with timely and consistent collection being lowest. This is in contrast to Hassan et al., (2021), who reported the potential of smart agriculture and the digital management of crop data for real-time, accurate monitoring, and Saiz-Rubio & Rovira-Más, (2020), who reported on the development of smart agriculture for both real-time and accurate monitoring. In contrast, the study confirms the findings by Quandt et al., (2020) which found that basic digital tools are available, but that data practices are mostly manual and sporadic in Tanzania's smallholder sector. However, the qualitative evidence is especially revealing, showing data collected on hard copy by the agricultural officers, while confirming the description of traditional methods by Quandt et al., (2020), and indicating that there is a lack of the use of the more sophisticated digital tools mentioned by Hassan et al., (2021), Mushi et al., (2022), and Sibanda et al., (2022). This is a crucial gap because Jouanjean et al., (2020) state that data governance and digital infrastructure shortcomings can perpetuate inefficiencies in agricultural transformation. While positive, this is a moderate finding as a majority of respondents said data is stored safely in phones or notebooks, Komossa et al., (2020) points out that the mode of data collection significantly affects the quality and comparability of data, and hard copy storage can restrict aggregation and longitudinal analysis. The discussion on training & resources indicates capacity building is there but not universal, which is similar to Owuor, (2020) call for strengthening M&E capacity as a prerequisite for performance.

Reporting is reasonably well organised, role clarity and report clarity have the highest scores, and timeliness and prompt sharing are lower. This is consistent with the patterns identified by Okafor, (2021), which suggested that structured reporting systems enhance accountability, but that delays in the time between monitoring and decisions reduce the feedback loop between monitoring and decision-making. The qualitative result that reports are given to the Sub-County Technical Planning Committee and then applied in decision making shows that there is a functional vertical reporting mechanism, which is also considered a strength according to Kühl et al., (2020) on integrated monitoring cultures. The findings of the data collection, however, indicate that the paper-based reporting approach reduces the level of analysis for which Avtar et al., (2020) attribute geospatial and digital integration to SDG monitoring. The moderate timeliness scores may indicate that reporting is structured but not

adaptive or real-time, which is identified as critical for early warning and responsive agricultural monitoring by Nakalembe et al., (2021).

Experiential learning as a result of data sharing and data use are generally strong (from learning visits and leadership support to share data), with insufficient mandatory sharing and consistent data use in decision-making. The learning-visit finding is a noteworthy strength, in line with the other findings of Köhl et al., (2020) and Reyes et al., (2020) both of whom stress knowledge exchange and indicator-based learning for sustainability. But the moderate score for data use in decision-making and low score on mandatory sharing imply that data use is voluntary and unequal, which Zscheischler et al., (2022) would read as an indication of perceived risks and vulnerabilities in sharing agricultural information, such as those around control and benefit distribution. Jouanjean et al., (2020) also point out that data governance who shares, accesses and/or uses it under what terms will influence whether or not data actually reaches decision makers. The fact that not all members actively seek data access suggests that the use of information is passive, not proactive, a feature of project M&E systems that is common according to Owuor, (2020). The degree of disagreement and of moderation is rather low, signifying that data sharing is accepted as a norm, but not strictly enforced, thus leaving an espoused to institutionalized gap.

Several cross-cutting patterns emerge from the findings. First, the study portrays an M&E system that is socially inclusive but technologically underdeveloped. Planning and reporting are participatory and structured, consistent with Okafor, (2021), Owuor, (2020), and Köhl et al., (2020), but data collection and sharing remain manual and officer-dependent, confirming Quandt et al., (2020) and contradicting Hassan et al., (2021), Mushi et al., (2022), and Saiz-Rubio & Rovira-Más, (2020). This digital divide is the single most consistent tension between the findings and the literature. Second, timeliness emerges as a systemic weakness: across all four domains, the lowest-scoring items relate to timely data collection, timely reports, prompt sharing, and consistent use in decisions. This recurring pattern suggests a structural constraint, likely rooted in resource, capacity, and paper-based workflow limitations, that Nakalembe et al., (2021) and Avtar et al., (2020) argue can be addressed through satellite and geospatial monitoring integration. Third, inclusion is a demonstrated strength, with equity findings exceeding what much of the literature predicts for smallholder groups, supporting Huyer & Partey, (2020) argument that gender-responsive M&E is achievable when deliberately structured into planning. Fourth, data utilization remains the weakest link in the M&E cycle: despite strong learning visits and leadership support,

mandatory sharing and decision-use lag, echoing Jouanjean et al., (2020) and Zscheischler et al., (2022) on data governance and perceived risks as barriers to utilization. Finally, contextual adaptation is a strength, as season-based, crop-calendar-synchronized monitoring demonstrates local adaptation consistent with Nakalembe et al., (2021) and Reyes et al., (2020), though it may trade off against the continuous, real-time monitoring advocated in the digital agriculture literature.

Finally, the results showed that supported agricultural groups in Nwoya District have moderate level of M&E practices in all the domains, planning being the strongest and data collection being the weakest. The study builds on the literature on participatory M&E, traditional data methods (Okafor, 2021; Owuor, 2020; Quandt et al., 2020; Köhl et al., 2020), and confirms concerns about data governance and utilization (Jouanjean et al., 2020; Zscheischler et al., 2022), but contradicts the digital agriculture literature (Hassan et al., 2021; Mushi et al., 2022; Saiz-Rubio & Rovira-Más, 2020; Sibanda et al., 2022) with regard to the adoption of advanced digital tools. The key takeaway is that enhancing timeliness and digital data support, alongside the current strengths of inclusion and structured planning, will have the greatest positive impact on the effectiveness of M&E work, and on project sustainability in the district.

5.2 The level of sustainability of supported agricultural groups

The results of the survey regarding the sustainability of the supported agricultural organizations reveal a medium to high degree of sustainability in economic, social, environmental and institutional aspects, with the social dimension being the most sustainable and the environmental dimension being the least. The findings that are discussed in the following are related to the literature cited and start with the economic dimension.

Economic sustainability was fairly good, and there was good agreement that resources are utilised efficiently and that group practices contribute to sustainability. It is consistent with Khan et al., (2022) who showed that working cooperatively and using new technologies significantly boosted farmer's income and with Durham & Mizik, (2021) who advocated that comparative economic analysis of production systems is vital for long-term viability. The identification of groups' diversification of income sources and financial risk management shows similarities with the findings of Mapanje et al., (2023), who emphasize that financial technologies and risk-sharing arrangements play a key role in facilitating financing for sustainable agriculture in Sub-Saharan Africa, and Zinnanti et al., (2023), who demonstrate

that income stabilization tools and risk management strategies are important to safeguard farmers against volatility risks. The relative consensus on the need for greater market access, however, suggests that market linkages are still a constraint, as Smidt & Jokonya, (2022) find value chain integration and digital technology adoption are common constraints for small-scale farmers. The qualitative features of adaptive management corroborate the self-correcting capacity linked to analytical support for managing sustainable agricultural organisations that Zakirova et al., (2020) identify.

Social sustainability had the highest level of overall agreement with good levels of solidarity, community relationships, knowledge sharing and inclusive decision making. This discovery is very much aligned with the findings of Pretty et al., (2020), who evaluated social groups for sustainable agriculture and land management and concluded that collective actions, trust and learning were important for sustainability. The high scores on respecting the voices of all and making decisions fairly are consistent with the gender-sensitive and participatory governance required for climate-resilient agriculture, which Huyer & Partey, (2020) consider to be key, and with the social cohesion results reported under the M&E objective. The slightly lower score for participation in enterprise selection indicates that it can be a relatively difficult process, aligning with Pretty et al., (2020) who point out that in complex decision-making, social groups have varying levels of member involvement.

The dimension of environmental sustainability was the lowest, and while basic conservation practices were good, innovation and strategic climate awareness were lacking. The widespread use of soil, water and biodiversity conservation practices lends credence to the findings of Setsoafia et al. (2022) showing that sustainable agricultural practices boost farm income and food security, and Vernooij (2022) who correlated crop diversification to climate-related resilience. The low scores for innovative technologies and effective environmental risk identification, however, are consistent with Kabato et al., (2025), who suggest that "climate-smart agriculture" needs conscious initiatives for sustainable agriculture and GHG mitigation, and with Nguyen et al., (2023) who state that "climate change and environmental degradation" create security challenges that require "transformative land use responses". The results indicate a gap between what kind of groups are aware of climate change and what kind of groups have the strategic awareness needed to assess environmental, climate and agricultural policies in a holistic manner, as argued by Streimikis & Baležentis, (2020). The low rate of innovative techniques use is indicative of some of the challenges in technology adoption highlighted by Smidt & Jokonya, (2022) and Lefore et al., (2021) for technologies

like solar irrigation which are inclusive and environmentally friendly. As shown in the case of the CARE group who attempted to purchase a water pump for their community, there is a huge gap between awareness of environmental issues and the financial and feasibility constraints of implementing innovative solutions.

The overall level of institutional sustainability was good, with high transparency and accountability, clear rules and governance structures, and institutionalised committees and constitutions. This aligns with Khan et al., (2020) who stress institutional capacity to manage risks and Daly et al., (2020) who have found a relation between institutional strength and the sustainability of livelihood interventions. The moderate rating on the planning component is a confirmation of the literature on M&E mentioned earlier, which indicates that planning, data collection, reporting, and data use lead to the early identification of problems (Okafor, 2021; Owuor, 2020), while the moderate score on adapting without external support again reflects the dependency concern raised by Khan et al., (2020). The identified poor leadership and poor record keeping as factors contributing to group disintegration is in line with Daly et al., (2020) on institutional determinants of sustainability. Perhaps most importantly, the delayed decision-making of some actors is the biggest hurdle to using M&E information, as this is the very problem for which consensus-based governance is intended to mitigate. This is a good point which casts doubt on the institutional picture and is related to the timeliness weakness noted in all four M&E domains.

Combining the sustainability results, one can see groups that are cohesive socially, institutionally well-governed, but economically challenged by a lack of market access and environmentally challenged by a lack of innovation and strategic climate awareness. This is in line with Movilla-Pateiro et al., (2021), who state that metrics for sustainability should reflect trade-offs across dimensions and not simply add them up without critical context, and Gava et al., (2020), who identify a need to focus on some practice gaps in policy evidence for agricultural sustainability. The relatively high social and institutional scores, and the lower environmental innovation and market linkage scores indicate that sustainability in these groups is more based on social capital and governance than on technology and/or market transformation. Increasing market access, innovation for climate change, institutional autonomy, and tackling decision-making delays that inhibit adaptive management would most enhance overall sustainability. The results, therefore, validate the literature on social groups and cooperative support (Pretty et al., 2020; Khan et al., 2022) and institutional determinants of sustainability (Daly et al., 2020; Khan et al., 2020) and indicate that

environmental innovation and market integration are the critical gaps that need targeted interventions.

5.3 Relationship between M&E practices and the sustainability of the supported agricultural groups

The results for the connection between M&E practices and the sustainability of the supported agricultural groups show that there is a strong positive correlation between the two and a regression model in which the four M&E practices explain a significant proportion of the variation in sustainability. These results validate the main thesis in the M&E literature that M&E is not just a compliance function, but a substantive contributor to project and organisational performance.

The relationship between M&E practices and sustainability has been found to be strong, concurring with Okafor, (2021) who noted that M&E systems have a significant impact on project performance and Owuor, (2020) who in her critical review of literature reported that the relationship between M&E practices and project outcome is generally strong. This is also consistent with Kühn et al., (2020) who state that the implementation of effective monitoring needs a culture of integration where data collection, sharing and use is routine within the organisation rather than standalone activities. The significant share of the variation in sustainability explained by the four practices, and the substantial share unexplained by the model, agrees with Daly et al., (2020), who show that sustainability of livelihood interventions is dependent on a combination of institutional, economic and contextual factors besides monitoring.

Of the single predictors, data collection was the greatest unique contributor. This result echoes the work of Komossa et al., (2020) which demonstrated that the method of data collection has significant impact on data quality and comparability, and Quandt et al., (2020) who found that systematic data practices are associated with increased agricultural productivity of smallholders. It also backs the work of Avtar et al., (2020) and Nakalembe et al., (2021) which state that reliable and timely data is the foundation for informed decision making and responsive agricultural monitoring. However, in this paper's qualitative result, the high strength of this predictor is seen due to manual data collection in hard copy, which is consistent with results of Quandt et al., (2020) but contradicts those of Hassan et al., (2021) and Saiz-Rubio & Rovira-Más, (2020) who are digital optimists.

The second strongest predictor was data sharing and utilization, in line with Jouanjean et al., (2020) who argue that data governance arrangements affect the flow of data to the decision-makers and Zscheischler et al., (2022) who suggest potential risks and vulnerabilities are a barrier to data sharing in agriculture. That the information would be valuable only if it was brought into the hands of people who could use it, which is stated in the M&E literature (Owuor, 2020; Okafor, 2021); and that social learning and information exchange lay the foundations of sustainable agricultural groups, in line with Pretty et al., (2020). The qualitative evidence indicates groups adapted enterprises according to performance results, for instance, replacing sunflower, which is low yielding, with high yielding groundnut, which can be seen as implementing this utilization pathway, and does add to the analytical support which Zakirova et al., (2020) provided for managing sustainable agricultural organizations.

Planning also emerged as an important predictor which corroborates findings from Okafor, (2021) and Owuor, (2020) that participatory planning and objective setting are factors influencing sustainability. The finding confirms the findings of Kühl et al., (2020) that the definition of what is monitored is co-created by stakeholders and this aligns with Huyer & Parthey, (2020) who argue that for agriculture to be gender-responsive and climate resilient, inclusive planning is needed. The qualitative data further bolsters the argument for temporal synchronization in African agricultural monitoring that was put forward by Nakalembe et al., (2021) in relation to season-based, crop-calendar-aligned planning.

By contrast, there was a positive, although not statistically significant, relationship between reporting and sustainability. This finding supports rather than challenges Okafor, (2021) who states that structured reporting will enhance accountability, but that the timing gaps will affect the feedback loop between monitoring and decision making. The lack of significance of reporting, when the other practices are controlled, indicates that reporting is not enough to get M&E information to work unless it is reviewed, shared and acted upon, which aligns with Jouanjean et al., (2020) on data governance, and with the earlier research finding that the main challenge to the use of M&E information is delayed decision-making by members. It also resonates with Kühl et al., (2020), who emphasize the need for integration along the entire data lifecycle in monitoring cultures and emphasize that this is not limited to a single part of the process.

The regression results as a whole depict M&E as a system where data collection, sharing, and utilization are key sustainability levers and reporting is a supporting (but not enough)

condition. It reinforces the findings of existing literature on participatory M&E and cooperative support (Okafor, 2021; Owuor, 2020; Khan et al., 2022; Pretty et al., 2020), and on data governance (Jouanjean et al., 2020; Zscheischler et al., 2022), but differs from the digital agriculture literature (Hassan et al., 2021; Mushi et al., 2022; Sibanda et al., 2022) as it demonstrates that more sustainable outcomes are being achieved through systematic manual practices, rather than more advanced digital tools. The main message is that improving reliable data collection, sharing M&E results and using them for decision making would best support the sustainability of supported agricultural groups and investments in reporting only would have less impact on the sustainability of the groups unless supported by active use of the information generated.

CHAPTER SIX

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

This chapter presents the summary of findings, conclusions, recommendations of the study and the areas for further research.

6.1 Summary of findings

The first objective focused on the extent of M&E of supported agricultural groups, covering four key aspects of the planning, data collection, reporting and data sharing and utilisation. Results showed moderately to highly established practices in all four domains, with planning being the strongest, involving inclusive participation in enterprise selection, objective setting and resource allocation, and by planning on a seasonal basis, aligned with a crop calendar. Lower scores were obtained in the domain of Data collection, with some lower scores within timeliness and consistency, and qualitative evidence supported that data is manually collected on hard copy by agricultural officers, showing limited use of advanced digital tools. Reporting was relatively well structured with clear roles and designated report writers and reports were fed into the Sub-County Technical Planning Committee for decision making, though timeliness and prompt sharing was not observed. Voluntary and some mandatory data sharing and use of data in decision making were both experienced as good: there was strong experiential learning and leadership support in this regard. Data sharing and use of data was very good experientially but weak in terms of mandatory sharing and inconsistent use of data in decision making, suggesting that data use was voluntary and inconsistent. Timeliness was identified as a systemic weakness across all domains and inclusion and structured planning were identified as strengths.

The second goal was to assess the sustainability of the agricultural groups that were supported in relation to the four pillars of sustainability (economic, social, environmental, and institutional). Social sustainability had highest scores with regards to solidarity, mutual support, community relations, knowledge sharing and inclusive decision making, although participation in enterprise selection was relatively low. Institutional sustainability was also high, with clear rules and governance, functional committees, formalised constitutions, transparent and accountable leadership, but adaptability (without outside support) was

moderate, indicating ongoing reliance on partners. Economic sustainability was moderately good, with efficient resource utilization, financial sustainability in the long-term, income diversification, and good risk management, however some members continued to report that the markets were a challenge. Environmental sustainability was the least developed dimension: basic conservation practices were implemented, but not much innovation; strategic climate awareness was low, and environmental risk identification and management was moderate. In summary, the focus of sustainability was mainly social capital and governance and not primarily technological or market transformation.

The third aim discussed the association of M&E practices and sustainability of agricultural supported groups. The results showed a significant positive correlation between the four practices of M&E and sustainability, accounting for a significant proportion of the variance in sustainability. The separate predictors had significant relationships with the outcome, with data collection being the most useful, followed by data sharing and utilisation, and planning. When the other practices were controlled, however, reporting was found to have a positive, though statistically insignificant, relationship with sustainability, implying that reporting alone is not enough if the reporting information is reviewed, communicated and acted upon. When considered in aggregate, the findings paint a picture of M&E as a system where: Data collection, sharing and utilisation are important sustainability levers; Planning is an underlying sustainability factor; but reporting is not enough. The results suggest that more reliable data collection, making M&E results available and accessible for decisions, and participatory planning would help to improve the sustainability of supported agricultural groups most.

6.2 Conclusion

The study concludes that the agricultural groups have achieved high levels of social, economic, environmental and institutional sustainability, successfully employing collective action to secure financial stability and mutual support

They utilize M&E for adaptive diversification and strategic risk-sharing (Ajates, 2020; Matzembacher & Meira, 2019). However, this internal strength is undermined by a significant gap, where dependence on external partners hinders their ability to swiftly and independently apply M&E findings, confirming that systemic barriers limit what collective action alone can achieve (Myeni et al., 2019).

While the groups exhibit strong social cohesion and transparent governance, their Social Sustainability is critically threatened by negative cultural moderation that limits women's participation in strategic decision-making. This structural inequity prevents the full utilization of the group's human capital, compromising the quality of collective choices (Khan et al., 2021). The findings underscore that long-term viability and high returns on sustainable practices are strongest when combined with supportive institutional frameworks and an adherence to principles of gender equity (Branca et al., 2022; Janker & Mann, 2020).

6.3 Recommendations

To foster true institutional sustainability, future support must transition from providing direct inputs to building sustainable external linkages.

It is recommended that partners focus on developing the groups' capacity for financial management and resource mobilization (e.g., accessing green finance or formal market contracts) to reduce reliance on timed donations. This shift strengthens the institutional framework required for sustained financial viability (Feroz et al., 2021; Streimikis & Baležentis, 2020).

Therefore, while the groups might seem sustainable, the groups remain institutionally fragile. Future interventions must focus on creating mechanisms for environmental risk mitigation and providing advanced training in resource mobilization to transition external partners into genuinely sustainable, collaborative networks. For example the outstanding scores for accountable leadership and clear structures are critical guarantees that the groups are managed ethically and consistently, protecting resources and resolving conflicts a necessary prerequisite for any sustainable institution.

To overcome the negative cultural moderation and strengthen Social Sustainability, the groups must institutionalize gender parity beyond mere participation. This involves implementing transparent rules that mandate equal representation in all decision-making committees and leadership roles. By ensuring women's voices are structurally empowered in strategic planning, the group will enhance its legitimacy and improve the quality of collective choices, which is foundational to long-term stability (Janker & Mann, 2020).

The successful institutionalization of M&E to identify problems early (M=3.64) further demonstrates a strong organizational culture geared toward self-correction and learning, distinguishing these groups as resilient institutions. However, the discussion must prioritize the critical finding of the gap, evidenced by the low score (M=3.31) for independence in handling challenges. This suggests the groups suffer from a dependency syndrome where skills transferred were sufficient for routine maintenance but inadequate for strategic autonomy when facing major, resource-intensive problems. This dependency, coupled with the moderate rating on the strength of external linkages (M=3.45), confirms that the groups cannot reliably mobilize the necessary external resources or technical consultation on their own.

6.4 Suggestions for future Research

The findings of this study revealed several unresolved issues and gaps that warrant further investigation. While the study established that M&E practices significantly influence sustainability, it also exposed persistent challenges that is the timeliness gap across all M&E domains, the insignificant independent contribution of reporting, the weak market linkages under economic sustainability, and the limited innovation and strategic climate awareness under environmental sustainability that require deeper and more targeted inquiry. The following areas are therefore suggested for future research:

1. A comparative case study of high-performing groups and low-performing groups within the same region, to qualitatively investigate the enforcement mechanisms for data collection and sharing and to understand the lived experience of the timeliness gap.
2. An investigation into why reporting was positively but insignificantly related to sustainability, including whether groups with stronger enforcement and utilisation practices are better able to translate reports into corrective action.
3. A quantitative study of the monetary impact of collective marketing strategies versus individual strategies, to provide a measurable return on investment for the market linkage recommendation and to address the comparatively low market access reported under economic sustainability.
4. An examination of the barriers to adopting innovative environmental techniques, including the cost, complexity, and feasibility constraints that groups face, in order to

inform targeted capacity building and technical support given that environmental sustainability emerged as the weakest dimension.

5. A longitudinal study tracking groups over time to establish causal direction between M&E practices and sustainability, given that the present study was cross-sectional and relied on perceptual data.
6. An exploration of institutional autonomy and dependency on external partners, particularly how partner-controlled input timing undermines group planning and risk assessment, as illustrated by the CARE group's experience with late seed supply.

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APPENDICES

Appendix I: Consent Form

Researcher: **AMUGE SALOME**, Gulu University, Master's Degree Candidate, Monitoring and Evaluation.

Purpose of the Study: You are invited to take part in this research study because your opinion matters. This study aims to investigate the factors influencing M and E practices and sustainability of agricultural supported projects in Nwoya District.

Procedures: If you agree to participate in this study, you will be asked to complete a questionnaire containing approximately ten minutes worth of questions. There are no known risks involved in completing this questionnaire, nor will there be any compensation offered for participating.

Confidentiality: Your identity and responses will remain strictly confidential. No personally identifiable information will be attached to the questionnaire or connected with your answers. The deidentified data will be stored securely and accessed only by authorized personnel for research purposes.

Voluntary Participation: **Taking part in this study is completely voluntary. Should you choose not to participate**, decline to answer any specific questions, or decide to withdraw at any point, you will suffer no penalties or loss of benefits.

Benefits: While there are no immediate benefits to participants, the study results may contribute to a greater understanding of factors influencing project design and sustainability of agricultural groups by NGOs in Nwoya District.

Contact Information: If you have any questions or wish to discuss the study further, please feel free to contact the researcher on **0782566466** or at **amssally@gmail.com**.

Consent Statement: By checking "Yes" below, you certify that you meet the inclusion criteria, fully understand the purpose, procedures, risks, benefits, and confidentiality of the study, and voluntarily give your informed consent to participate in this research.

_____ Yes, I freely and voluntarily consent to participate in this study.

Signature Date

Please return the signed consent form along with the completed questionnaire in the provided envelope. Once again, thank you very much for your cooperation and assistance. We appreciate your contribution to advancing our understanding of factors influencing agricultural groups by NGOs in Nwoya District.

Appendix II: Questionnaire

Section A. Demographic characteristics

Please tick (✓) the appropriate box or provide the requested information.

1. **What is your current age?** ☐ Under 18 ☐ 18-24 ☐ 25-34 ☐ 35-44 ☐
45-54 ☐ 55-64 ☐ 65 or older
2. **Please indicate your sex:** ☐ Male ☐ Female
3. **What is your marital status?** ☐ Single, never married ☐ Married ☐ Divorced ☐
Separated ☐ Widowed
4. **What is the highest level of education you have completed?**

Certificate ☐ Primary School ☐ Secondary School ☐ Diploma/Certificate ☐
Bachelor's degree ☐ Master's degree ☐ Doctoral degree

Section B: M & E practices of agricultural supported groups

Please read each statement carefully and place a tick (✓) in the box that best represents your level of agreement. The options are: SD – Strongly Disagree, D – Disagree, NS – Not Sure, A – Agree, and SA – Strongly Agree. Tick only one box for each statement. Be honest in your responses, as there are no right or wrong answers.

Planning

S/N	Statement	SD	D	NS	A	SA
1.	All group members participate in selection of enterprises e.g maize, beans, poultry					
2.	All group members participate in the formation of objectives					
3.	All members (women, youth groups, men, elders considered) voices are respected during objective development					
4.	All group members participate in resources allocation (land, human capital, finances)					
5.	During planning, challenges, management strategies are discussed					
6.	During planning data collection data strategies are discussed					

Data Collection

S/N	Statement	SD	D	NS	A	SA
1.	Data is consistently collected for our group					
2.	The schedule for data collection is agreed upon by the group					
3.	Data collection is timely					
4.	Data is stored where members feel is safe e.g phones, books					
5.	Data collectors are trained on the data collection process often					
6.	Adequate resources are provided to support effective data collection.					

Reporting

S/N	Statement	SD	D	NS	A	SA
1.	There is a structured way of reporting in our group					
2.	Specific members are assigned to generate reports					
3.	Reports are clear in content					
4.	Reports are generated timely					
5.	Reports are shared timely with group members and other stakeholders					
6.	We all understand the nature of reports we have					

Data sharing and utilisation

S/N	Statement	SD	D	NS	A	SA
1.	The group has planned data sharing moments					
2.	Group members demand for data sharing and utilisation					
3.	It is mandatory to share data after its collected					
4.	Data is always used for decision making					
5.	We always go for learning visits as a group					
6.	Our leadership support data sharing and utilisation.					

Section C: Level of sustainability of agricultural supported groups

Tick the Sustainability Index created Each response option has a numerical value: Strongly Disagree (SD) = 1, Disagree (D) = 2, Not Sure (NS) = 3, Agree (A) = 4, Strongly Agree (SA) = 5.

Economic Sustainability

S/N	Statement	SD	D	NS	A	SA
1	The agricultural support group has helped participants maintain a stable and reliable income.					
2	Resources within the group are used efficiently to maximize production outputs.					
3	The group provides opportunities for participants to diversify income sources.					
4	Financial risks are effectively managed through group activities or strategies.					
5	Participation in the group has led to increased access to markets or buyers.					
6	The group's economic practices support long-term financial stability.					

Social Sustainability

S/N	Statement	SD	D	NS	A	SA
1	All group members participate in the selection of enterprises.					
3	All members (women, youth groups, men, elders) voices are respected during objective development.					
4	Group activities have led to improved trust and cooperation among members.					
5	Decision-making processes within the group are fair and inclusive.					
6	Members have opportunities to share knowledge and learn from one another.					
7	The group has strengthened relationships within the wider community.					
8	The group members can count on each other in case of adversity or hard situations.					

Environmental Sustainability

S/N	Statement	SD	D	NS	A	SA
1.	The group encourages sustainable land and resource management practices.					
2.	Activities of the group contribute to reducing negative environmental impacts like soil erosion, deforestation					

3.	Members adopt practices that conserve soil, water, and biodiversity.					
4.	The group promotes awareness of climate change and environmental risks.					
5.	Environmental risks are identified and managed effectively in the group's operations.					
6.	The group supports the adoption of innovative techniques that improve production and protection of the environment.					

Institutional Sustainability

S/N	Question	SD	D	NS	A	SA
1.	The group has clear rules, policies, and governance structures					
2.	Leadership within the group is transparent and accountable.					
3.	Planning, data collection, reporting and utilisation of data help the group identify problems early.					
4.	The group is able to adapt to challenges without external support.					
5.	Policies and procedures ensure continuity and long-term viability.					
6.	The group maintains strong linkages with government, NGOs, or other supporting institutions/individuals.					

Section D: cultural practices

S/N	Statement	SD	D	NS	A	SA
1.	The group has fully shifted from engaging in traditional farming methods to modern methods					
2.	The group respects customary land use and ownership practices.					
3.	Knowledge of indigenous agricultural practices is shared regularly.					
4.	Cultural beliefs no longer affect agricultural practices like, the type of crops grown and timing of planting and harvest.					
5.	The group incorporates cultural practices into training and development.					
6.	Oral traditions are used to pass down farming knowledge.					

Thank you for your time

Appendix II: Key Informant Interview

Researcher: **AMUGE SALOME**, Gulu University, Master's Degree Candidate, Monitoring and Evaluation.

Purpose of the Study: You are invited to take part in this research study because your opinion matters. This study aims to investigate the factors influencing M and E practices and sustainability of agricultural supported groups in Nwoya District.

Procedures: If you agree to participate in this study, you will be asked to complete the Interview guide containing approximately ten minutes worth of questions. There are no known risks involved in completing this questionnaire, nor will there be any compensation offered for participating.

Confidentiality: Your identity and responses will remain strictly confidential. No personally identifiable information will be attached to the questionnaire or connected with your answers. The deidentified data will be stored securely and accessed only by authorized personnel for research purposes.

Voluntary Participation: **Taking part in this study is completely voluntary. Should you choose not to participate**, decline to answer any specific questions, or decide to withdraw at any point, you will suffer no penalties or loss of benefits.

Benefits: While there are no immediate benefits to participants, the study results may contribute to a greater understanding of factors influencing project design and sustainability of agricultural groups by NGOs in Nwoya District.

Contact Information: If you have any questions or wish to discuss the study further, please feel free to contact the researcher at **0782566466** or at **amssally@gmail.com**.

Consent Statement: By checking “Yes” below, you certify that you meet the inclusion criteria, fully understand the purpose, procedures, risks, benefits, and confidentiality of the study, and voluntarily give your informed consent to participate in this research.

____ Yes, I freely and voluntarily consent to participate in this study.

Appendix II: Key informant Interview Guide

Interviewer: Can you briefly introduce yourself and your role in relation to the agricultural groups in Nwoya District?

Research Question 1: M&E Practices

1. How does the group plan activities and decide what should be monitored?

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2. What kind of data is collected, and how is it collected in practice?

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3. Who is responsible for gathering and keeping the data?

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4. How are findings or reports prepared and shared within or outside the group?

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5. In what ways is the information used to guide decisions or improve activities?

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6. What challenges or gaps exist in planning, collecting, reporting, or using data?

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Research Question 1: Level of sustainability of agricultural supported groups

1. What do you know about M &E practices?. which ones existed in farmer groups. (prob for What M &E practices existed for farmer groups, planning, data collection, reporting, utilization of m and e findings)

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2. What can you mention about is the level of sustainability of agricultural supported groups (prob if many or few agricultural groups are sustainable and reasons that have led to their status or level of sustainability, challenges to sustainability if any)

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3. What mechanisms and strategies have been put in place for the long-term success of the projects after external funding or support has ended.
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4. How do M&E practices (planning, data collection, reporting and utilization of data) contribute to the sustainability of agricultural projects? have there been instances where insufficient attention is paid to these practices, what challenges exist, what do you recommend)
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Research Question 3: Moderating effect of cultural practices

1. How do cultural practices affect M & E practices (Prob for its effect on planning, data collection, reporting and utilization of m and findings of agricultural groups)
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2. How do cultural practices affect sustainability of agricultural groups? (economic, social, environmental and institutional).....
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3. What are the benefits cultural practices and how do they affect sustainability of agricultural groups.....

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4. Please provide any other recommendations or suggestions.

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Thank you for your time

Appendix III: Focus group discussion guide

Section 1. Introduction (5-10 minutes)

My name is Amuge Salome, a student at Gulu University. I am conducting a study on M&E practices and sustainability of agricultural projects a case of Nwoya district. I am conducting this study as a requirement in the attainment of the degree of Master of Monitoring and Evaluation. You have been identified as a resourceful persons to this study and I kindly request you to participate in this study. The information that you shall give shall be treated confidentially and shall be used only for the purpose of this study. Please feel free to give your views. We expect the session to run for about 60-90 minutes.

We will set a few ground rules to guide our discussion. (list set ground rules)

Can you share what crops or animals your group focuses on and why you chose them?

Section 2. Planning (15-20 minutes)

This section will explore the themes relating to planning.

1. "Thinking back to when your group started, how did you decide on the enterprises you would focus on, like maize, beans, or poultry?"

Probe: "Did everyone get to share their ideas?" "What was that process like?"

2. "When you set goals or objectives for your group, how did that happen? Who was involved?"

Probe: "Were the voices of women, youth, or elders all heard and respected?" "Can you give an example of a time when someone's idea was incorporated?"

3. "When it comes to using group resources, such as land, money, or labor, how are those decisions made? Is it a group decision, or do a few people make the choices?"

Probe: "How do you ensure resources are allocated fairly?" "During planning, what kinds of challenges did you discuss? What about strategies to overcome those challenges?"

Probe: "Can you give an example of a challenge you planned for and how it turned out?"

Section 3 Data collection (25-25 minutes)

1. "Let's talk about keeping records. Does your group regularly collect data about what you are doing?"

Probe: "What kind of information do you collect?" "Who is responsible for this?" "How often do you do it?"

Section 4 Reporting

1. "When you have collected this information, what happens with it? Do you have a specific way of reporting what you've found?"

Probe: "Is it clear to everyone what is being reported?" "Are the reports shared with all group members?"

Section 5 Data sharing and utilizationnn.

2. "How often do you use this information to make decisions for your group? Can you give an example of a time when the data helped you decide something important?"

Probe: "What kind of decisions were made based on the data?" "What happens when the data shows a problem?"

3. "Thinking about the future, what could be done to make data collection and use more helpful for your group?"

Section 6. Sustainability (20-25 minutes)

1. This section explores the four dimensions of sustainability and the moderating effect of cultural practices.
2. "Let's talk about the long-term success of your group. How has participating in this group affected your family's income and stability?"

Probe: "Have you seen any changes in how you manage money or risks since joining?" "What helps your group remain strong financially even after the external support ends?"

3. "How has being a member of this group changed the relationships among you? Do you feel more trust and cooperation?"

Probe: "What happens when a member is faced with challenges?" "How does your group support members during hard times?"

4. "Let's think about your farming methods. Does your group discuss how to protect the environment things like soil and water?"

Probe: "Do you use any traditional farming practices? How do they help or hurt your group's long-term success?" "What about new, innovative farming practices do you use those?"

5. "In your group, are there clear rules and leadership? How do these structures help you deal with challenges and ensure the group continues for a long time?"

Probe: "How does the leadership make sure they are accountable to everyone?" "How does your group adapt to new challenges or changes?"

6. Finally, let's talk about cultural practices. How do traditional beliefs or practices in your community influence your group's activities, such as when you plant or harvest?"

Probe: "Do these beliefs affect how you collect information or make decisions as a group?"
"In what ways do traditional practices help your group succeed?" "Are there any that create challenges?"

5. Wrap-up and final thoughts.

Final question: is there anything else you think is important for us to know about your group's journey that we haven't talked about yet?

I would like to thank all of you for your time and contribution to the study.