# UNIVERSITY OF RWANDA

# COLLEGE OF BUSINESS AND ECONOMICS

# SCHOOL OF BUSINESS

**ANALYSIS OF BENEFICIARIES INVOLVEMENT ON SUSTAINABILITY OF RURAL DEVELOPMENT PROJECT IN RWANDA**

**A CASE STUDY: SUSTAINABLE WOODLAND MANAGEMENT AND NATURAL FOREST RESTORATION PROJECT (PGREF),**

**PERIOD: 2016-2019**

**RESEARCH PROJECT SUBMITTED TO UNIVERSITY OF RWANDA IN PARTIAL FULIFILMENT OF THE REQUIREMENT FOR AWARD OF MASTER IN BUSINESS ADMINISTRATION (MBA).**

**BY**

**UMUBYEYI Micheline**

**Reg. N$^{O}$: 218015737**

**JUNE, 2021**

## DECLARATION

This thesis is my original work and has not been presented for a degree in any other University or for any other award

**UMUBYEYI Micheline**

Sign _____ Date _____

I confirm that the work reported in this thesis was carried out by the candidate under my supervision

Name: **Dr. RUTUNGWA Eugene**

Sign _____ Date _____

## DEDICATION

This study is dedicated to the all mighty God my family due to their support and encouragement.

## ACKNOWLEDGEMENTS

I am using this opportunity to express my gratitude to everyone who supported me throughout the course of this MBA project. I am thankful for their aspiring guidance, invaluably constructive criticism and friendly advice during the project work. I am sincerely grateful to them for sharing their truthful and illuminating views on a number of issues related to the project

I express my warm thanks to my thesis Supervisor Dr. RUTUNGWA Eugene, from the University of Rwanda College of Business and Economic for his support and guidance. The door was always open whenever I ran into a trouble spot or had a question about my research or writing. He consistently allowed this paper to be my own work but steered me in the right direction whenever he thought I needed it.

I would also like to thank the project implementers and the beneficiaries of Rwanda Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) who acted as respondents on course of this study. I am also grateful to all the people who provided me with the facilities being required and conductive conditions for my MBA project.

Thank you!

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## ABSTRACT

The study sought to ascertain the extent to which beneficiaries are involved in the implementation of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) activities; to define the perception of beneficiaries on the project sustainability.to identify factors that influence beneficiaries' participation in project activities, to examine the advantages or disadvantages of beneficiary involvement in project sustainability in Rwanda and to assess the strategies for beneficiary involvement to enhance project sustainability. The researcher used the questionnaire, unguided interview and documentary technique to collect data. The questionnaire was given to 384 respondents selected from both project implementers and beneficiaries of (PGReF).The results indicated that the beneficiaries participated neither in project design nor determine the project location, but they involved in implementation phase .Also the findings showed that 29.95 % of respondents strongly agreed that beneficiaries' involvement in PGReF project allowed the increase forest cover and improved the living conditions of the forest dependent people. Furthermore, results indicated that 30.21% of respondents disagreed that inadequate funding affect their involvement whereas 41.15 % of respondents strongly agreed that inadequate training in the project affect their involvement. The analysis indicated that beneficiaries' involvement in planning phase has low significant ($p=0.09$) effect on project sustainability but has positive coefficient with sustainability. The sustainability is simulated by $Y= 0.34+ 0.36X$ also the analysis indicated positive correlation coefficient between PGReF sustainability and beneficiaries involvement. The study suggests project implementers to enhance the empowerment of beneficiaries through capacity building and to integrate beneficiaries during commencement of the project. The beneficiaries are encouraged to keep the sense of project ownership developed since the beginning even after external assistance to Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) has been terminated so that they could continue benefiting from it.



**Key words**: Beneficiaries 'involvement, project sustainability

## LIST OF ABBREVIATIONS AND ACRONYMS

**ADB**: Africa Development Bank

**CBE**: College of Business and Economics

**CBO**: Community Based Organization

**IFAD:** International Fund for Agriculture Organization

**MBA**: Master of Business Administration

**NGO**: Non-Government Organizations

**NPO**: Non Profit Organizations

**PGReF**: Sustainable Woodland Management and Natural Forest Restoration Project

**RNRA**: Rwanda Natural Resources Authority

# CHAPTER ONE

# GENERAL INTRODUCTION

## 1.0. Introduction

This chapter represents the general background regarding the beneficiaries' involvement as the active process by which beneficiary groups influence the execution of a project and project sustainability. It encompasses the background of the study, problem statement, study objectives, research hypotheses, justification of the study, the significance of the study, the scope and the structure of the study.

## 1.1. Background of the study

In developing countries including Rwanda, projects are the backbone of local development. Development projects are undertaken to improve the livelihood of the community and depends primarily on proper project identification, commitment, knowledge and capacity building of the beneficiaries. Moreover, values, norms, social belief and opinions of the local people which are affected directly or indirectly by development interventions should also be considered (Andrews et al., 2011). There is unmistakable evidence that community participation has a favorable impact on the outcomes of a project and this linkage gets established through better aggregation of preferences, better identification, through use of local knowledge and pressure by community on bureaucracies to perform and better sustainability through ownership (Richard, 2009). In rural areas, a significant number of projects fail to fully meet the expectations of people because they either become unsustainable or fail altogether.

Beneficiaries' involvement in project development has been taken as an alarming debate in the last decades and the empirical researches are rare (Fleur et al., 2016). In rural development project, beneficiaries' involvement has a long stand history by considering beneficiaries as target group and they have the right to be engaged in decision making which increase their livelihood and project sustainability (Hermawati, 2019). Recently theorist reported that participation theory must be located within a wider approach which sees strong accountability towards beneficiaries as the critical variable in social empowerment and emancipation however beneficiaries involvement is not recognized (Brett, 2003). When reviewing the empirical literature, there appears to be a dearth of research on accountability towards beneficiaries in

general, let alone on beneficiary participation (Wellens & Jegers, 2016). One of the aspects of beneficiary participation hardly ever studied is the perceptions of the beneficiaries themselves and other stakeholders on beneficiary participation practices in place (Wellens & Jegers, 2016).

There is evidence that countries across the world had designed projects that involve in rural development like community development, integrated rural development and basic needs did not result in substantial rural poverty alleviation (Schneider et al., 2010). For example, Asian initiated project concerned about improvement in the quality of life but restricted community development in rural areas and as results many of these projects did not succeed to deliver the pre-designed objectives at the right time in accordance with government plan (Todaro & Smith, 2009).

In addition Asian rural development project encompasses radical improvement in social relationship governing land tenure, access to land, technology, labor, physical infrastructures, access to services and political organization of society but they faced challenges of non-well-defined beneficiaries at their first stage of projects implementation (Hacking & Hacking, 2019).Likewise Europeans project use different approaches such as group and participatory based approaches into large-scale investment projects and allow advices delivery on a range of topics, including: strategies to promote involvement, project formulation, group formation, financial arrangements, training, monitoring and evaluation which improve economic and social status of communities (Wanders & Wada, 2015).

In United states of America a developed country has been experienced to involve the beneficiaries into project implementation, this was pointed out by Africa Development Bank (ADB, 2004) in its reports saying that, in rural development projects financed by ADB, the new approaches include (i) beneficiary consultation and participatory planning; (ii) community development support; (iii) engagement of nongovernment organizations (NGOs); (iv) local government involvement; and (v) private sector involvement, defined in this report as the use of private individuals, enterprises, or financial institutions to achieve project objectives (Rezende, 2016).

One step ahead in Africa, government and non-governmental agencies realized more and more that the main reason of many unsuccessful development projects was (and still is) the lack of active, effective and lasting involvement of the intended beneficiaries. Consequently, several

agencies started to promote the involvement of people, in development through various programs, mostly on a pilot basis (Dharmayet al., 2019).

For Rwanda to overcome those challenges there is plan of sensitizing people to make them more responsive to develop projects and to encourage local initiatives and self-help; involving people as much as possible actively in the decision-making process which regards their development (Sarriotet al., 2015). Beneficiaries are encouraged to involve in resources control, access to services, bargaining power; promoting effective planning and implementation of development (Holmen et al., 2017). The above initiative for Rwanda would be implemented under the project titled Rwanda Sustainable Woodland Management and Natural Forest Restoration intended to contribute to reducing deforestation and poverty in the Congo Basin. Its specific objectives are to: increase forest cover and improve the living conditions of forest-area dwellers and create basic conditions that would win Rwanda eligibility for carbon market benefits and payment for ecosystem services.

But the scenario of how beneficiary's involvement helps this project to perform has never been documented anyway. Thus, this research aims to coming up with the solution for problems of unsustainable project that lead to meet the planned objectives in effective way.

### 1.2. Statement of the Problem

Many development projects like Rwanda Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) face challenges of sustainability, often attributed to a lack of participation in project decision-making by the intended beneficiaries (Mansuri & Rao, 2012). This necessitates the initiation of participatory planning and implementation of development projects (Marks & Davis, 2012).Studies show that community participation in project decision-making, particularly at the planning stage, contributes to project sustainability (Madajewiczet al., 2014).

For instance, a study by Meyers et al (2019), indicates that community participation in non-technical decisions that involve choosing what project to construct (i.e., what need is important) and deciding how to use and manage the project has a strong positive correlation with project sustainability as measured by the aspect of project maintenance. Similarly, a study by Dythyet al., (2003) shows that the origination and initiation phase, in which major decisions on project objectives and planning for the project's execution are made has a significant influence on the project's success and sustainability.

Beneficiaries' involvement is the cornerstone of forestry project performance, without urgent prioritization of the involvement of the intended beneficiaries or people concerned in rural development initiatives; it would be difficult to achieve rural project performance and sustained rural growth (Aga et al., 2018). Although it is advantageous to involve beneficiaries in project activities, it is also sometime challenging and has negative effects if they are not appropriately involved. It is in this regards this study assess the beneficiaries' involvement in Rwanda Sustainable Woodland Management and Natural Forest Restoration Project.

This project would have environmental, climatic, social and financial impact through harvesting of woodlots, private micro-woodlands and Agroforestry trees which would help to reduce the pressure on protected and unprotected natural forests unfortunately biodiversity conservation still challenging.

Rwanda, commonly in agriculture and forestry sector, there is a significant increase in projects aimed at improving the agricultural production. However some projects fail to meet their objectives based on the lack of ownership when project beneficiary have no appropriate participation. Project sustainability is still a big challenge in government projects in Rwanda, especial the agricultural projects (IFAD report, 2014)

The lack of ownership of the community beneficiating from the project might be due to the absence of their integration through the project formulation process. And thus the beneficiaries feel not welcome into its implementation. And the failure of the project after the exit of the funding agent might be caused by the absence of an exit strategy to deliver the project into the community hands, to organize themselves to maintain the project's outcomes.

On the basis of the factors that Sustainable Woodland Management and Natural Forest Restoration project (PGReF) was a large scale project that covered eight districts in Rwanda, the mobilization of beneficiaries' involvement in all concerned districts seemed to be a complex and a critical aspect as the responsibility of project implementers. It is from this scenario of beneficiaries' involvement and the project sustainability after exit strategy that the researcher is prompted to conduct an assessment on beneficiaries' involvement and sustainability rural development project in Rwanda with a specific reference of Sustainable Woodland Management and Natural Forest Restoration project (PGReF).

## 1.3 Objectives of the study

### 1.3.1 General objective

The overall objective of this study is to analysis of beneficiaries' involvement on sustainability of rural development project in Rwanda. A case study of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF), Period from 2016 to 2019

### 1.3.2 Specific objectives

1) To ascertain the extent to which beneficiaries are involved in the implementation of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) activities;
2) To assess the project sustainability of PGReF
3) To identify factors that hinder beneficiaries' participation in project activities.
4) To examine the advantages or disadvantages of beneficiary involvement in project sustainability in Rwanda.
5) To assess the strategies for beneficiary involvement to enhance project sustainability.

## 1.4. Research questions

1) What are the extents to which beneficiaries are involved in the implementation of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) activities in Rwanda?
2) At which extent Woodland Management and Natural Forest Restoration Project (PGReF) is sustainable?
3) What are the factors that hinder beneficiaries' participation in Woodland Management and Natural Forest Restoration Project (PGReF) activities in Rwanda?
4) What are the advantages or disadvantages of beneficiary involvement in Woodland Management and Natural Forest Restoration Project (PGReF) sustainability in Rwanda?
5) What are the strategies for beneficiary involvement to enhance project sustainability?

## 1.5. Research hypothesis

A hypothesis is defined as a researcher's prediction regarding the outcome of the study. A hypothesis states possible difference, relationship or causes between two or more variables or concepts. (Bailey, 1978).On the course of this research, the following hypothesis were formulated.

**$H_0$**: There is no relationship between beneficiaries' involvement and the sustainability of Woodland Management and Natural Forest Restoration Project (PGReF)

**$H_1$**: There is a relationship between beneficiaries' involvement and the sustainability of Woodland Management and Natural Forest Restoration Project (PGReF)

### 1.6 Justification of the study

By focusing on the effect of beneficiaries' involvement on sustainability of rural development project in Rwanda. A case study of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) which are one of goals of development; It is an important aspect in the country's development process. It is also anticipated that the results of the study may be an important source of additional knowledge on sustainability of rural development. Beneficiaries from different donor funded projects may also benefit from the findings of this study in improving factors affecting their involvement which increase their economic status.

Further, recommendations from the findings may help other development project members in sustaining the funded projects so that they continue to harness the benefits even after the withdrawal of the external support.

NGOs funding various development projects in and out of the area of study may utilize the recommendations in formulating policies which will ensure sustainability of respective projects. The findings, conclusions and recommendations will add to the existing body of knowledge in the area. At the same time scholars and researchers may utilize the study in future research undertakings.

### 1.7. Research interest

The study provided a good insight to service delivery agencies, like NGOs, CBOs and other service delivery agencies as they think of embracing community involvement in their interventions. This study intends to help different institutions to be aware of the challenges of community participation and therefore try to mitigate them. The findings will add literature for academicians and practitioners in the area of community involvement.

### 1.7.1 Personal interest

This study helped to get useful knowledge about the effect of beneficiaries' involvement on sustainability of rural development project in Rwanda. Furthermore this study intends to help the researcher fulfill the requirements for awarding the master degree at university of Rwanda.

### 1.7.2 Rwandan Government interests

Given the desire of the Republic of Rwanda to have all rural project sustainable , the study will hopefully enabling officials, especially planners of any rural project to select from the research text those issues and elements which are necessary to solve the issues facing forestry projects implementation.

### 1.7.3 Project manager's interests

The study enabled project managers to understand the effects of involving beneficiaries in forest management and sustainable practice, ecological and socio-economic monitoring and baseline data; and livelihood and economic development.

### 1.7.4 Academic interest

This study intends to be very useful for anyone who will be interested to carry out a research in the same field in the future in different perspective including writing their research work in the same field in reviewing what we have done and increase the understanding on beneficiaries' involvement on the sustainability of rural developments projects.

## 1.8 Scope of the study

The scope of this study is specified in terms of the concept, content scope, the geographical scope and the time scope.

### 1.8.1 Content scope

The study focused on the role of beneficiary's involvement on sustainability of rural developments projects" A case study of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF)."

### 1.8.2 Time scope

This study assessed the effect of beneficiaries' involvement on sustainability of rural development project in Rwanda; A case study of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) in time interval of four years from 2016 to 2019.The time of four years is sufficient to provide effective information that clarified the extent to which beneficiaries participated in the implementation of the project under study as it implementation closure took place in 2018.

### 1.8.3 Geographical scope

The study was carried in eight Districts where PGReF was implemented. The districts were (1) Nyaruguru; (2) Gisagara; (3) Huye; (4) Nyamagabe; (5) Nyanza; (6) Ruhango; (7) Muhanga; and (8) Kamonyi.

## 1.9 Limitations and delimitations of the research

As the researcher applied the questionnaire and interview as the only instrument for collecting primary data; there was a problem of reaching the studied sites due to lockdown inherent to corona virus .A few of the respondents was reluctant in giving information fearing that the information would be used to intimidate them or print a negative image about them. Corona Virus Pandemic was a great uncertainty impacts that affects human and economic effects; and it impacted this study as the researcher exerted a delay due to unavailability of data at the planned time moreover, the researcher faced a barrier of low level of education on some respondents who were not able to comprehend effectively the instrument used for data collection which required the great guidance of the researcher.

## 1.10 Organization of thesis

This study is organized in five chapters. The chapter one: Introduction giving the background of the study, problem statement, general and specific objectives, research questions, significance of the study. The chapter two is compiling review of literature mentioned by other scholars and authors, reports, articles in trade journals concerning the role of beneficiaries' involvement and the sustainability of rural developments projects. Furthermore, chapter three is explaining the methodology to be used compile this study. Elucidating various ways to be used to collect data, process it, analyses it and finally present. It describes the proposed research design, the targeted population, sampling design, data collection instruments and procedures,

and the techniques data analysis. Chapter four dealt with data presentation, analysis and interpretation and the last chapter of this study refers to presentation of key findings, conclusion and recommendations of the study.

# CHAPTER TWO

# CONCEPTUAL AND THEORETICAL LITERATURE

## 2.0 Introduction

This chapter explores the current research and offers insights and critically analyses the literature of the main themes of the research to establish effective and clear understanding on beneficiaries' involvement on the sustainability of rural development projects. It is organized into three main sections covering the main themes that are theoretical literature, theoretical framework, empirical literature on sustainability of forestry projects and critical literature that leads to the knowledge gap of the study.

## 2.1 Conceptual literature

This section highlights the definition of key concepts including beneficiaries, beneficiaries' involvement, project, sustainability and rural development project. Defining these terms enables the reader and the researcher herself to fully understand the variables under study

### 2.1.1 Beneficiaries

Beneficiaries are the people meant to benefit from the project. It is also refer to those individuals or groups who are ultimately the direct or indirect recipients of project outcomes. They are mainly present in the communities that the project is targeting. However, there may be others in the communities that are not beneficiaries (Marschke et al., 2008). Mansuri & Rao (2004) argues that participation is about the active involvement of project beneficiaries in at least some aspects of project design and implementation, so that beneficiaries can influence the course and implementation of development projects.

### 2.1.2 Beneficiaries involvement

Theron (2005) defined beneficiaries' involvement as the active process by which beneficiary groups influence the direction and the execution of a project rather than merely being consulted or receiving a share of the project benefits. The active involvement in development projects of a specific group with shared needs living in a defined geographical area. Through this social process, the community actively pursues identification of its needs, makes decisions and establishes mechanisms to have these needs materialize (Campbell & Jovchelovitch, 2000).

Mathbor (2008) defined beneficiaries' participation as a process by which beneficiaries' act in response to public concerns, voice their opinions about decisions that affect them, and take responsibility for changes to the community,

### 2.1.3 Project

A project is defined as an intervention that addresses a particular problem. A project is a one-off set of activities with a definite beginning and an end (Robbins & Decenzo, 2004). A project has been the subject of considerable debate over the years among the practitioners of project management and the goal of developing a comprehensive definition of what a project is has remained elusive over the years (Crawford & Bryce, 2003).

### 2.1.4 Sustainability

Sustainability is used as synonymous with words such as "long term' "durable", sound' or systematic (Filho, 2000). It is also the continuity of what a community has started in a particular area.In a similar view (Kland, 2015).considers sustainability as the ability to manage post-project dynamics through the use of permanent institutions.

### 2.1.5 Project sustainability

Project sustainability is critical for the long- term success of a project, but in practice it is often lacking, especially in development projects (Kland, 2015). Project sustainability as the ability of development projects such as water facilities or irrigation schemes to continue a flow of benefits at a specified level for a long period after project inputs have ceased (McConville & Mihelcic, 2007). For the purposes of this article, the meaning of project sustainability can be captured by the following two definitions.

Wood (1994) defines project sustainability as a project which is capable of being supported and maintained by a community or individual over an extended period of time with an absolute minimum of outside assistance. For projects to be sustainable there must be community participation. This is because, according to Zachariah & George (2008), through participation, the community develops skills for collective action, maintenance and sustainability.

### 2.1.6 Role of beneficiaries' involvement in development project

Mansuri & Rao, (2004) argued that beneficiaries' involvement in project have significant role including: Enhancing sustainability, improving efficiency and effectiveness, allowing poverty reduction efforts to be taken to scale, making development more inclusive, empowering poor people, building social capital, and strengthening governance.

### 2.1.7 Strategies for beneficiary involvement

According to Theron (2005) effective, efficient and equitable beneficiary involvement depends largely on the choice and use of appropriate strategies. Beneficiary participation as used by development agents range widely in terms of innovation and setting. In most strategies field situations they are classified depending on the interest of the development agent. In this work beneficiary involvement strategies are assessed according to the classifications of (Kok & Gelderbloem, 1994). These classifications are information sharing, consultation, decision-making and initiating action.

### 2.1.8 Factors affecting project sustainability

Project execution includes a great range of factors having an effect on the sustainability of the positive outcomes and both internal and external forces should be identified as part of the planning process. Internal factors are features inside the community or the project management whereas external ones are coming from outside of the project such as economic situation. The factors can be divided in numerous ways and here they are divided into institutional structures, project practices and contextual factors (House, 2007).

#### 2.1.8.1 Institutions

Support from the administrational level such as national and regional agencies is an essential factor for the project sustainability. Political outlines together with the local legislation and policies such as national strategic plans have a great influence on the project practices on the high level since they steer the development work on a country level. Aligning project practices with local policies is important in order to reach sustainable results (AusAID, 2000).

### 2.1.8.2 Project practices

McConville (2006) asserted that project management and the whole project life-cycle from planning to evaluation significantly determine the outcome. In planning and design phase proper preparations are essential to carry out, the operational approach has to be efficient and monitoring and evaluation effective in terms of affecting on the activities.

### 2.1.8.3 Contextual factors

Contextual factors include social and cultural factors such as the characteristics of the project community in terms of gender equality and division, baseline skills and educational level as well the quality of the leadership and existing rules and regulations (House, 2007).

### 2.1.9 Indicators of project sustainability

Various elements have been found to contribute to project sustainability. These included identification analyses, planning, resource mobilization, implementations, monitoring and evaluation (Freeman, 2004). From the reviewed literature, it is evidenced that sustainability is a concept that has shaped international development in many ways. It is also very much evidenced that critical indicator of sustainable development cannot be measured only by the long term benefit being accrued from a project but from a consolidated contribution of all aspect sustainability mostly stakeholder participation.

**Table 1: Project Life Cycle Stages and Levels of beneficiaries Involvement**

| **Project Life Cycle Stages** | **Level of beneficiaries' involvement** | | | |
|---|---|---|---|---|
| | Inform | Consult | Partnership | Control |
| Identification analysis | √ | √ | | |
| Planning | | | √ | |
| Resource mobilization | | | √ | |
| Implementation | | | √ | √ |
| Monitoring and evaluation | | √ | √ | √ |

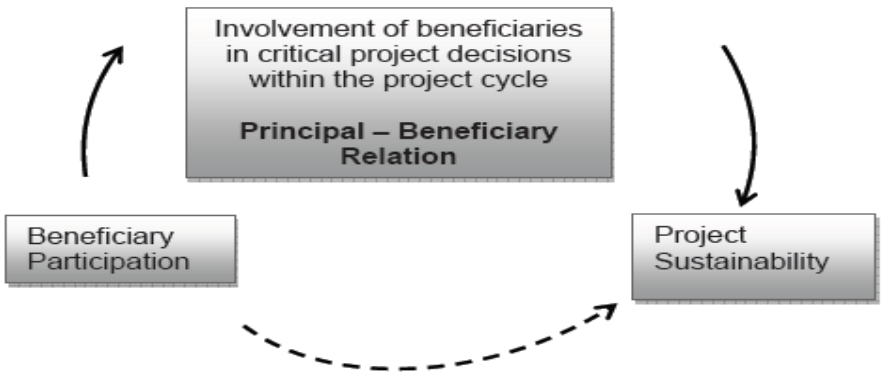
**Source:** Adapted from (Freeman, 2004).

### 2.1.10 Relationships between beneficiaries' involvement and Project Sustainability

Beneficiaries' involvement is essential for any project to be sustainable, when people participate; they understand what a project entails. This way there can be fewer misunderstandings with regard to project aims. Time is reduced in giving explanations because people understand and know what is going on. With community participation, the people take responsibility for the project and assist by contributing to the maintenance of the project (Freeman, 2004).

This way fewer costly outside resources are needed thus contributing to the efficiency of the project (De Beer & Swanepoel, 1998). Once a community knows it will benefit from a project, the members are more likely to make their skills, indigenous knowledge and resources available.

Establishing sustainable development projects is crucial. That is why development agents must ensure that projects continue after external assistance to the project has been terminated. Not only should the projects be environmentally sustainable and initiated by the community itself, but the projects should be owned and managed by the benefiting communities. Community participation is the most important means to secure the sustainability of a development project (Kellerman, 1997).




**Source:** Kellerman, (1997)

Figure 1: Illustration of the link between participation and project sustainability

As the figure indicates, some proponents of the participation, sustainability concepts suggest a direct linkage between the two (as shown by the dashed arrow).

### 2.1.11 Challenges for project development

Challenges such as illiteracy among members, lack of effective communication, transparency, and accountability and group size. Kelly &Magongo (2004) recognized poor governance within the project is one of the key challenges facing sustainability of many projects. Knowledge of good governance varies widely, but most project managers have very little understanding on the roles and functions of all the project staff, participants, financials and stakeholders.

Willett (2006) identified absence of strategic planning as one of the major challenges facing funded projects. Few projects have strategic plans which would enable them to have ownership over their mission, values and activities. This leaves them vulnerable to the will of donors and makes it difficult to measure their impact over time. Poor staff competencies pose a major challenge in many development projects; Staff competencies are crucial for the smooth management of the funds given by donor in the development projects. Well-trained staffs are able to prudently plan and utilize the resources in the right manner (Marcus, 2005).

### 2.1.12 Barriers to effective participation

A host of factors has been identified as obstacles to effective participation in development programs and projects. Oakley (1991), discusses three major obstacles to people's participation which are structural, administrative and social barriers. Structural obstacles form part of the complex and centralized organizational systems that control decision making, resource allocation and information, and are not oriented towards people's participation. This situation is usually typified by a 'top-down' development approach. Administrative obstacles relate to bureaucratic procedures, operated by a set of guidelines and adopt a blue print approach, providing little space for people to make their own decisions or control their development process. The social impediments include mentality of dependence, culture of silence, domination of the local elite, gender inequality, and low levels of education and of exposure to non-local information

### 2.1.13 Accountability to beneficiaries

The importance of downwards accountability to beneficiaries is strongly acknowledged within academic literature. Amongst other literature, downwards accountability to beneficiaries' features within Wellens and Jegers (2017) claim Non Profit Organizations (NPO) to be

ultimately accountable to their beneficiaries because they are the stakeholder that receives the service of the NPO. As such, beneficiaries should have the right to participate in decisions that affect service delivery, and affect their daily life. However, Schmitz *et al* (2012) research suggests that NPOs' aspirations to engage in downwards accountability are not as yet matched by their practices.

## 2.2 Theoretical review

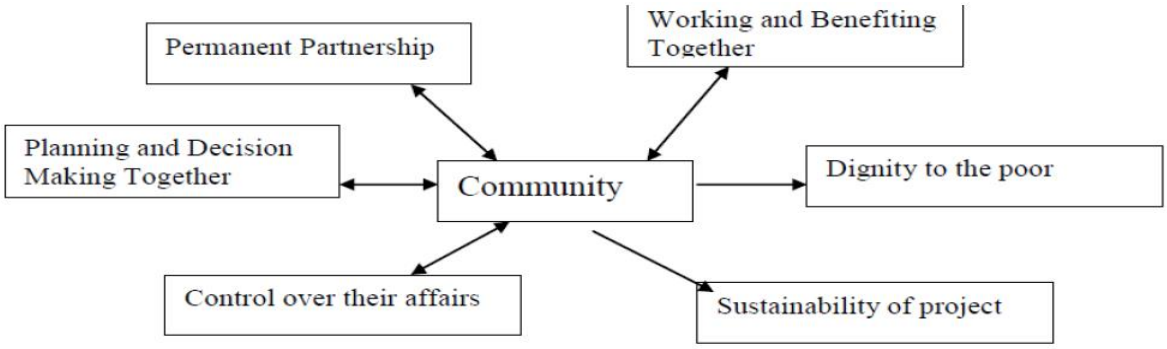
### 2.2.1 Participation theory

The theory of participation was developed by Buchy *et al.,* (2000). The theory posits that participation represents a move from the global; spatial, top-down strategies that dominated early development initiatives to more locally sensitive methodologies (Davids, 2009).The roots of citizen participation can be traced to ancient Greece and colonial New England. Before the 1960s, governmental processes and procedures were designed to facilitate "external" participation. Citizen participation was institutionalized in the mid -1960s with President Lyndon Johnson's Great Society programs.

In nutshell, this participation theory developed by Buchy et al.,(2000) states that participation process of local beneficiaries is initiated by the government towards the local community to be a vertical relationship termed as top down strategy. It implies that Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) was designed by the Ministry and implemented in the required areas favorable to forestry projects. It was the duties of the project designers to set and incite the participations platforms of project beneficiaries which justify that the theory supports the current study.

### 2.2.2 Partnership theory

Narayana (2002) in his book Empowering Communities through Participatory Methods, explains that in the top-down model of participation, the governments decide and provide for the communities which develops a sense of dependency and lethargy among the people. He presents an alternative to the top-down model in the form of a "partnership model" where the governments and communities work together in planning and decision-making with long-lasting results. This model informs this study in that the model advocates for involvement of the beneficiaries (community) in the decision making (Narayana (2002).




**Source**:Kearney (2015).

**Figure 2:** Partnership model for involvement of the beneficiaries in the decision making

Beneficiaries' ideas can be easily incorporated into the project, encouraging continued participation because these gestures reassure beneficiaries that they can meaningfully contribute to the project, regardless of their level or area of expertise (Kearney, 2015). Participation is also a way that people can share their mental models for others to understand; through this understanding, an outside organization can facilitate reciprocal information sharing and improve the beneficiaries' understanding of a project (Kearney, 2015). To encourage continued participation and foster reciprocal information sharing, participatory approaches should begin as early as possible and involve as many beneficiaries as possible (Basu & Kaplan, 2015).

Beneficiary centered, participatory projects continue to be carried out based on predetermined solutions, outside agendas that overpower local knowledge, and limited beneficiary involvement in decision-making. The projects use participatory activities as a forum to inform the beneficiaries of project details that have been previously decided or of their expected contributions to the project (Mansuri & Rao, 2004).

The interactions between the outside organization and the project's beneficiaries remain "top-down" in approach because they are characterized by one directional, asymmetrical flows of information from the organization to the beneficiaries. Asymmetrical flows of information limit the beneficiaries' involvement in the project, the incorporation of local knowledge into the project, and the beneficiaries' understanding of the project. As discussed in the previous section, beneficiary-centered, participatory development projects disseminate information to the beneficiaries in asymmetric, one-direction flows, instead of sharing information reciprocally (Kearney, 2015). In terms of sustainability the theory was appropriate as it clearly showed why the project offered Capacity building in terms of training and the development of

skills in record keeping to the beneficiaries as a way of ensuring sustainability as supported by (Okun, 2008).

All the theories explored by the researcher both participatory and partnership theories are similar in the ways that both indicate the paramount role of project designers in extending the participatory approaches of project beneficiaries through integration in the platforms designed on the course of project planning. Obviously, local communities are direct and nearest supporters of forestry projects that imply the importance of their participation to secure the sustainability of forestry projects. It profoundly indicates a great need of community participation on the course of Woodland Management and Natural Forest Restoration Project (PGReF) due to the fact the project was large scale and implemented in eight districts which incited the great input of the nearest and remote communities.

### 2.2.3 Critiques of beneficiaries involvement in project

The literature analyzed so far has highlighted the potential gains from beneficiaries' involvement in project development. Among others, the literature has touched on the concept's potential of reversing power relations in a manner that creates voice for poor people, allowing them to have more control in matters that affect them. Christens & Spear (2006) are quick to point out one major concern with the use of the concept in the context of development assistance. They stress that development agencies hiding behind the beneficiaries involvement in several situations to implement participatory practices in ways that advance their goals instead of helping the very people they claim to assist.

In a related line of argument, Cooke & Kothari (2001) assert that participation in practice does not really depict openness and bottom-up as the process is commonly held to be. They maintain the argument that the basic paradigm of participation often does not function as the tool for reversing power relations as suggested. Instead, efforts at participation largely maintain existing power relationships, though masked behind the aegis of participation. This masking is what they see as inherent tyranny.

## 2.3 Empirical literature

### 2.3.1. Empirical literature pertaining beneficiaries' involvement

Hague et al., (2003) in his study" effectiveness of community participation on the sustainability of community based projects in identify four ways in which community participation in

planning influence project sustainability: That participatory planning carries 15 with it feelings of ownership, and builds a strong base for the intervention in the community. The study applied both a questionnaire and guided interview and multiple regression analysis. The findings presented that the risk categories associated with a BOT agriculture projects in Turkey. The study asserted effective participation of beneficiaries contributes effectively to the sustainability of projects. (P< 0.05,r=0.015, b=0.813),lead to a better estimation of the resources needed to perform a task. According to findings of Hague, participatory planning can be initiated by any of the parties involved in the project and the forms it will take and the timetables are likely to be negotiated and agreed amongst participants. The process is rooted in the recognition that a community is pluralist and there are legitimate conflicts of interest that have to be addressed by sensitive to differences in power, and seek to ensure that these do not pre-determine outcomes and threaten sustainability of community projects. For effective and sustainable development to be realized, the community, which is the major beneficiary of the project, must participate through project implementation committees in, project planning and other aspects such as budgeting, resource identification, procurement and allocation of resources.

World Bank, (2012) conducted a study entitled Community participation determinants and success of projects in South Asia region 'The study emphasized on 103 selected villages. The authors conclude that community design satisfaction is a significant predictor of improved health in all three locations. They also find that 'design participation' and 'local decision-making' are significant predictors of 'satisfaction with service design'. 'Local decision-making' reflects that community members, as opposed to government officials or other outsiders, made the final decision about what type of system to build." However, as discussed below, no villages in Karnataka were allowed to make this decision which makes this a meaningless variable (and therefore troublesome in its significance). As another example, they state that households in Karnataka did not have to contribute towards construction costs, which is not true. Yes, households did not have to contribute towards the water portion of the project, but they had to contribute towards sanitation and projects were not supposed to commence on any portion of the project until these funds had been raised.

Narayan (2008) conducted a study entitled "Impact of participation of the community on the success of community based projects "The researcher studied 121 rural water supply projects in 48 countries. The data for this study were collected from project evaluation reports, and a

multivariate regression model was used to attempt to understand the effects of beneficiary participation on overall project effectiveness. In this study, participation was scored on a one to seven point scale, with a score of one indicating no participation, and a score of seven indicating high levels of participation. From the report, it is not clear what each of these levels captures. The study also looked at when participation occurred in the project cycle during the planning, construction or operation and maintenance stage. Using factor analysis, the statisticians determined that 'overall beneficiary participation' could be used as the main measure of participation. A measure of 'overall project effectiveness' was also generated using factor analysis on 20 performance outcomes. This study found beneficiary participation to be a significant indicator of overall project success; however, there are several problems with this study. First, each project had a different type of participation, ranging from when participation occurred to how participation occurred and who participated (Narayan, 2008).

Munyui (2015) researched on "Factors influencing sustainability of community water projects: a case of Kitui West Sub-County, Kitui County." The aim of the research was to investigate the factors influencing sustainability of community water projects in Kitui West Sub-County in order to make appropriate recommendations for enhancing sustainability of community water projects. The study used descriptive survey design. Data was collected using closed ended questionnaires, interviews and Focused Group Discussion (FGD). The collected data was analyzed and presented using descriptive statistics in form of frequency tables and Multiple Regression Analysis to establish the relationship between the variables. The study established that sustainability of community water projects in Kitui West Sub-County was being influenced though differently by community participation, technology, management and financial factors.

Mochiemo (2014) did a study on factors influencing sustainability of water projects in slum areas of Nairobi County: a case of Maji ni Maisha water project. The aim of the research was to investigate the factors affecting sustainability of water projects in Kenya with particular reference to Maji ni Maisha water project. The study used descriptive research design in collecting data for the study because it usually provides rich detail about the project. The data for the study was collected using the questionnaires. Quantitative data was analyzed using correlation and regression with the aid of Statistical Package for Social Sciences (SPSS17.0).The study established that water projects sustainability was influenced by financing, governance, community participation and monitoring and evaluation to high levels as project implementation and management require sufficient funding drawn from varying

financial sources so as to ensure efficiency and timely procurement and maintenance of required skills, equipment and facilities. Governance is of importance in project management and performance as it provides a framework for project accountabilities and responsibilities.

Community participation is essential in successful design, implementation, management, Performance and sustainability of the project. There was lack of professional and technical supervision, low community participation in monitoring due to the inadequacy of data and general information. He recommended provision of general education and information and use of participatory tools such as participatory urban appraisal and many others are valuable particularly for initiating beneficiary participation processes for neighborhood and design initiatives for local projects. The project management should effectively control use of resources by analyzing resource utilization on a regular and timely basis so as to be able to identify resource variances and inefficiencies early so that corrective action can be taken before the situation gets worse.

Rimberia (2012) conducted a study on "Effect of community participation on project Sustainability: a case of water projects in Kieni East division, Nyeri County, Kenya". The purpose of the research was to investigate the effects of the level of awareness of the community, development approaches, community contribution and feasibility study on sustainability of water projects in Kieni East division. Data was analyzed by use of descriptive statistics such as means, standard deviation and frequency distribution. The study revealed that all the factors (level of awareness, development approaches, community contribution and feasibility study) had a positive influence on the sustainability of water projects in Kieni East Division. Community contribution had the greatest influence followed by feasibility study, development approaches and level of awareness respectively.

### 2.2.2. Empirical literature pertaining exit strategy and sustainability

Mulwa (2013) did a study on effectiveness of community participation on project sustainability of water supply projects in central division, Machakos District of Machakos County, Kenya. The aim of the study was to investigate the factors which influence sustainability of water supply projects in Central Division, Machakos District of Machakos County. Descriptive survey design was employed. Qualitative and quantitative methods were both used for the investigations. The study revealed that project planning and implementation, community management, cooperation of stakeholders and financial management influence sustainability

of water supply projects in the division. These findings imply a lot on the supply of water as regards project development for enhanced availability of water supply. The study recommends that effective implementation of exit-strategy that refers to the involvement of the beneficiaries in all activities of projects management contribute to project sustainability.

A study by (Kinoti, 2010) investigated "The effectiveness of exit strategy and the sustainability l performance shortly after external support is withdrawn and recommended that further study be done on factors that influence sustainability of such projects in other rural parts of other countries in Africa in order to bring a generalization of the findings.

### 2.2.3. Empirical literature pertaining participation and welfare

Kipkeny (2014) conducted a study on" Factors affecting sustainability of community managed hand pump operated shallow wells as rural water supply system in Garissa Sub-County". The study sought to determine the factors affecting sustainability of hand pump operated shallow wells in Garissa Sub-County. Descriptive research design was used for the study. Data analysis was done using descriptive statistics and percentages. Data was presented in frequency tables. The findings showed that 72.45% of the respondents felt that their shallow wells are functional with other factors such as drying up of the well and lack of spare parts as the major causes of non-functionality. 92.86% of the respondents reported that the shallow wells can be sustained continuously by the community management structures. In conclusion hand pump operated shallow wells can be effectively and efficiently managed by the community established structures with increased functionality and sustainability with adequate capacity building of community institutions, technical support and effective financial management. Therefore, the projects contributed considerably and adequately to the improvement of life conditions of the community and access to the overall sanitation requirements of the community**.**

## 2.4. Research Gap

All reviewed studies presented in this study indicate that involvement of beneficiaries and participation of the community in rural development project is essential and contributes to the sustainability of project. There is a knowledge gap as the theories do not clarify effective participation and involvement of beneficiaries on the course of all phases of project life circle. Moreover, they do not emphasize on the concept of exit strategy that is the paramount importance strategy to integrate beneficiaries and empower them as there was clear evidence

that most projects were not self-sustaining after withdrawal of funds by the donors that leads to discontinuity of project. The study intends also to respond to the problem of scarcity of similar studies observed in Rwanda.

### 2.5 Description of project under study

The Rwanda Sustainable Woodland Management and Natural Forest Restoration Project responds to the need to preserve forest resources meet the needs of the population for forest products and improve their income through income-generating activities. The project would contribute to the achievement of the national strategies and priorities contained in Vision 2020, the forestry policy, the national agricultural strategy and the national poverty reduction strategy. It would also increase the rate of forest cover and reduce the rate of deforestation and would ultimately contribute to the constitution of carbon stocks and the reduction of global warming. The project comprised the following four components (i) Forest management and sustainable practices; (ii) Ecological and socio-economic monitoring and baseline data; (iii) Livelihoods and economic development; and (iv) Project management.

### 2.6 Conceptual frame work

The following conceptual mode is going to establish the relationship between independent and dependent variables in our topic and moderating intervening variables for both sides.

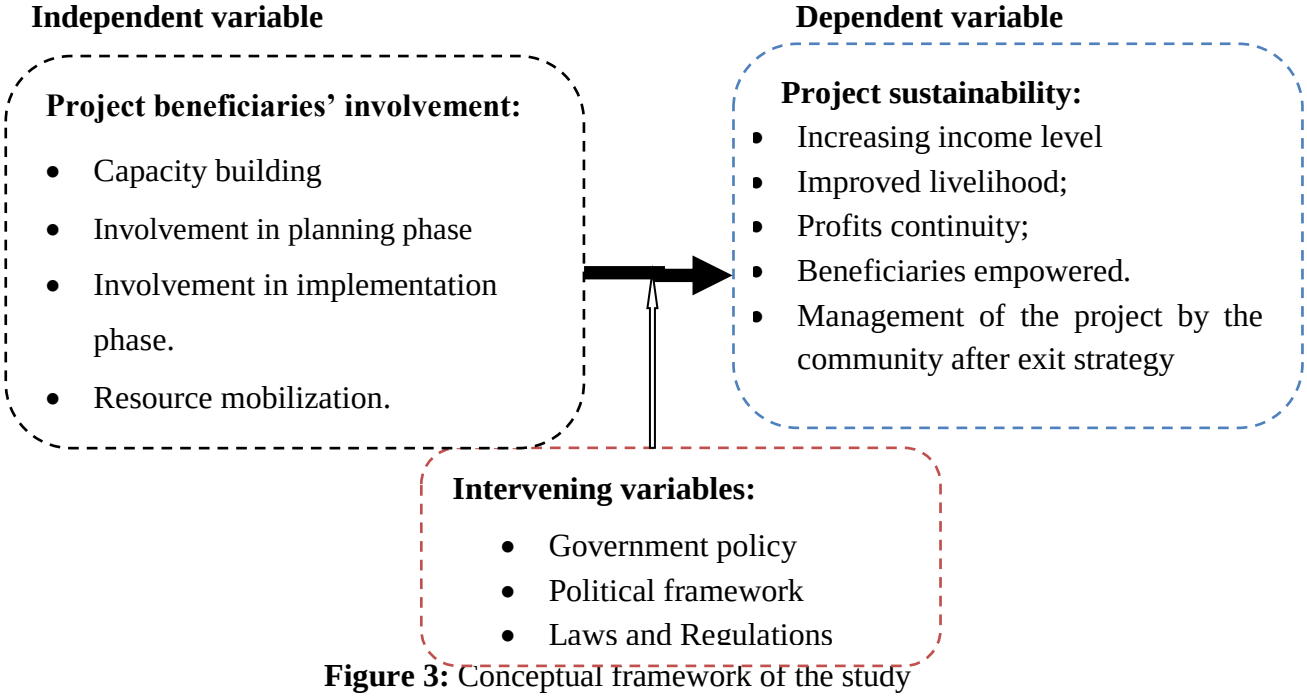



**Figure 3:** Conceptual framework of the study

**Source:** Researcher's compilation from literature review (2020**)**

The following independent variable will be assessed on the sustainability for “Sustainable Woodland Management and Natural Forest Restoration Project (PGReF”).As depicted on the conceptual framework, the subthemes of independent variables are beneficiaries participation in planning phases, implementation phase and their involvement after exit strategies of donors. The subthemes incorporated in project sustainability are increasing income level, achievement of project objectives; improved livelihood; profits continuity; and empowerment of beneficiaries.

# CHAPTER THREE

# RESEARCH METHODOLOGY

## 3.0. Introduction

This chapter presents the research methodology used to carry out the study. Specific sections present the research design, the target population, the sampling technique, sample size, research instruments, validity, reliability, data collection procedure, data analysis data management, also presents ethical considerations, during the research period.

## 3.1 Research design

This research used descriptive survey design. This is because the research is based on the views and opinion of the respondents who involved in the implementation of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF). Descriptive research design is used (Kothari, 2004) when the problem has been defined specifically and where the research has certain issues to be described by the respondents about the problem. Mugenda (2003) defined research design as an attempt to collect information from members of a population in order to determine the current status of the population with respect to one or more variables. Descriptive research design is used (Kothari, 2004) when the problem has been defined specifically and where the research has certain issues to be described by the respondents about the problem.

## 3.2 Target population

According to Bridget & Cathy (2005) defined a population as the totality of persons or object with which a study is concerned. Bowling (2002) concurs with Bridget & Cathy (2005) defined a study population as a group or category of human being, animals and other things that have one or more characteristics in common as a target population of the universe.The direct beneficiaries of the project were: (i) 600,000 households (i.e. nearly 3,000,000 people) who would benefit from forest and/or fruit plants; (ii) 400 vulnerable people who would benefit from private micro-forestation; (iii) 1,200 farmers who would receive training, 200 of whom would be supported to form community cooperatives (seven beekeeping cooperatives and seven cooperatives of women mushroom growers); (iv) 24 technicians from RNRA and its partners who would benefit from additional training through the project. The direct

beneficiaries also included all persons to be temporarily employed during the production and planting of seedlings, and during the implementation of forest management plans.

### 3.3. Sample size

A sample is defined as a subset of the target population. This study use OpenEpi, Version 3, open source calculator r to computer sample size.

$$n = \frac{DEFF * N * p(1-p)}{[d^2 z^2_{1-\alpha/2} * (N-1) + p * (1-p)]} - \frac{1.5 * 601824 * 0.5 * 0.5}{[\frac{(0.75\text{^}2}{1.96\text{^}2} * (601824-1) + 0.5 * 0.5]} = 384$$

Where p= probability of success=0.5, 1-p is probability of non-success, N is total population, d= margin error = 0.75, DEFF =design effect =1.5 and Z is the z-score =1.96 at 95% CI, and n is the sample size. Based on the total population (N) =601,824. The sample size are equal distribute in eight district where the project have been implemented therefore 43 respondents in each district were selected from project beneficiaries and 40 respondents from the staff who can comprehend effectively the implementation process of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF).

#### 3.3.1 Sampling technique

Sullivan,(1990) accredits this simple random technique with the exceptional advantage of treating the target population as a unitary whole. In this regard, its attempt to guarantee an equal opportunity may in a way minimize bias and prejudice. On the course of this study, the researcher addressed herself to the beneficiaries of the project randomly. In this regard each element has an equal chance of being chosen. Sullivan, (1990) credits this technique with the exceptional advantage of treating the target population as a unitary whole. In this regard, its attempt to guarantee an equal opportunity may in a way minimize bias and prejudice. This technique is effective to this study because the sample size was deducted from both project beneficiaries and implementers of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF)

### 3.3.2 Data collection methods

For the researcher to obtain quantitative and qualitative data, both primaries and secondary were used through questionnaire and interview. It consisted of both open and close ended questions. According to Mugenda (2003), the open ended or unstructured questions permit greater depth of response from the respondents while the closed or structure questions are usually easier to analyze.

## 3.4. Measurement and scaling

In order to accomplish this study, two types of data were collected. These are primary data and secondary data.

### 3.4.1. Types of data

To achieve the objectives of this study, two types of data were collected by the researcher. They are primary and secondary data

#### 3.4.1.1 Primary data

The primary data is said to be the first hand observation and investigation. Primary data was collected for the study. This type of data is more relevant and reliable than secondary data since it is from the source. Primary data also provides firsthand information. A questionnaire was administered to both project beneficiaries and implementers of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF).

#### 3.4.1.2 Secondary data

Grinnel & Williams (1990) described secondary data as an extensive study and review of published and unpublished documents, reports journals, newspapers and policy reports relevant to the study was used. Secondary details «A data gathering method that makes use of pre-existing data» Richard M. Grinnell. This technique is important because it reviews the literature and tries to canvas both global and national perspectives so that the researcher could have a comparative framework for analysis and evaluation. On the course of this study, secondary data were collected from textbooks, internet, and reports of the Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) activities.

### 3.4.2. Categories of data

#### 3.4.2.1 Normal data

As nominal data refers to a group of non-parametric variables, the researcher used nominal data to analyze the profile of the respondents that participated in the study as they basically refer to discrete data (Bryman et al, 2007). It incorporates gender, age and experience of beneficiaries and project implementers of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF).

#### 3.4.2.2 Ordinary data

Ordinal data reflect quantities that have a natural ordering (Brymanet al, 2007). They were used by the researcher to assess the views of the respondents on the sustainability of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) activities extracted from likert-scale questions.

### 3.5 Data collection instruments

#### 3.5.1 Questionnaires

Berg (2009), asserts that a questionnaire is a method used for collecting data; a set of written questions which calls for responses on the part of the clients. It may be either self-administered or group administered. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Bryman et al, 2007).In this research, the Likert-type questionnaire was designed for the study question that addressed the research questions to the smple size

Harper (1989) described an interview as a conversation in which the researcher tries to get information from the interviewee; the person to be interviewed may be an expert in the field, or, you may simply need some kind of personal response from individuals. Interviews were conducted by the researcher, because the conversation was controlled to some degree, for example, the interviewee could be asked to repeat or clarify, or the conversation could be moved in a different direction by asking different questions. On the course of this study, unguided interview was used to converse with the beneficiaries and staff of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF).

### 3.6 Reliability and Validity

Reliability and validity are two essential parts of any successful research. A researcher requires the quality assessment of the study which is based on two factors reliability and validity of research instruments. According to the experts, the measurement procedure must be reliable for a study to be considered as valid.

#### 3.6.1. Validity of research instruments

According to William (2005), the research instrument that the researcher used is questionnaire. The validity of this instrument refers to how accurately a method measures what it is intended to measure. If the study has high validity that means it produces results that correspond to real properties, characteristics, and variations in the physical or social world. In this research, the content validity index was used. Content validity is the degree to which an instrument has an appropriate sample of items for the construct being measured and is an important procedure in scale development. Content validity index (CVI) is the most widely used index in quantitative evaluation. In this research, the content validity index was calculated from the formula below:

**CVI**=n/N Where
**CVI**: Content Validity Index
**N**: Total number of items in questionnaire
**n**: Number of relevant items in the questionnaire
The higher the ratio of content validity index the more valid is the instrument of the research. When the ration is less than 0.5 the instrument used for data collection is not valid. On the course of this study, the researcher tested the reliability of the questionnaire as depicted in table 4.2.of this study. The number of items of researcher instruments was 69, and the corresponding test validity index was 0.9843 which proves that the research instrument used was reliable.

#### 3.6.2. Reliability of research instruments

Reliability refers to how consistently a method measures something. If the same result can be consistently achieved by using the same methods under the same circumstances, the measurement is considered reliable. On the course of this study, reliability was tested using the Cronbach's alpha correlation coefficient with the aid of Statistical Package for Social Sciences (SPSS) software. Alpha correlation indicates that the instruments reliable when the coefficient is greater than 0.5. In addition, before administration of the questionnaire to the respondents, a

pilot test was done to a sample of 5respondents beneficiaries of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF).

### 3.7. Data gathering procedure

#### 3.7.1. Editing

Editing of the data is a process of examining the collected raw data to detect any errors and omission and to collect them when possible.( Kendall, 1961) The act of editing is done during the data collection and after the data collection that is immediately after interview, filled or answered questionnaire would be checked to ensure that all answers given were coherently and logically to provide sufficient information. Editing was done to ensure the data are accurate consistent with other facts gathered uniformly entered as complete as possible and have been well arranged to facilitate coding and tabulation. Normally editing was done throughout the data collection as soon as the questionnaire schedule had been completed.

#### 3.7.2 Coding

According to Rowley (2006), coding is the procedure by which data are categorized. Through coding the raw data are transformed into symbols usually numerals that may be tabulated and counted. The transformation is not automatic: however, it involves judgment on the part of coder.

#### 3.7.3. Tabulation

According to Lewis (2009), tabulation refers to the part of technical process on statistical analysis of data that involves counting to determine the number cases that fall into various categories. Thus after eliminating errors, codes were assigned to each answer. This stage led to the construction of statistical tables showing frequency distribution of answers to questions addressed to respondents.

### 3.8. Data processing and analysis

#### 3.8.1. Data processing

This part of researcher study is very important to the research after data collection in any scientific and accounting, research, there is a need to condense the large quantities of data collected these facilities easy processing of data collected it is necessary to edit code tabulate

and analyze, present as actual finding of the study (Rowley,J., 2006).On the course of this study, the researcher used SPSS (Statistical Package for the Social Science) for data processing. The codes were assigned on the questionnaires were applied for converting into secondary data that are susceptible for convenient interpretation.

### 3.8.2. Data analysis

The researcher used Statistical Package for Social Science (SPSS) to analyze primary data that were collected from the questionnaires. The model that was used is interpretation of data by frequencies that display the frequencies and percentage frequency. As a descriptive study the researcher applied descriptive statistics such as mean and standard deviation. To analyze the relationship between beneficiaries' involvement and project sustainability, a multiple linear regression analysis model was used to test the significance among variables.

## 3.9 Ethical consideration

In the data collection, respondents were handled carefully and the information they were treated confidentially by protecting their identity. When collecting the data, the respondents were not forced to give information in favor of the researcher. Before the administration of the questionnaires, the researcher requested for appointment of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) beneficiaries and projects implementers.Describe the extent to which results would be kept confidentially. State that a participant is voluntary and that they are free; explain to them what the study is all about.

# CHAPTER FOUR

# DATA PRESENTATION, ANALYSIS AND INTERPRETATION

## 4.0. Introduction

This chapter presents the results found in form of tables indicating descriptive statistic regarding to the analysis of beneficiaries' involvement on sustainability of rural development project in Rwanda, a case study: sustainable woodland management and natural forest restoration project (PGReF), period: 2016-2019. Given that the questionnaire had, multiple questions measured using a Likert scale, its internal consistency was determined using Cronbach's alpha reliability test in SPSS package. Cronbach's alpha values indicate high and acceptable levels of internal consistency. As indicated in table (2) the Cronach's alpha value of the research questionnaire was .0.9843. A descriptive statistic model was used to analyze and interpret data with correlation design to find the relationship between beneficiaries' involvement and the sustainability of the project under study.

**Table 4. 2: Representation of reliability coefficient**

| **Test scale = mean(Unstandardized items)** | |
|---|---|
| Average interim covariance: | .9463208 |
| Number of items in the scale: | 69 |
| Scale reliability coefficient: | 0.9843 |

**Source:** Primary data, December 2020

## 4.1 Background of respondents

This section refers to the presentation, analysis and interpretation of data regarding the background of the respondents who participated in this study. As they were selected from the beneficiaries of sustainable woodland management and natural forest restoration project (PGReF),their background influence the reliability, accuracy of data collected from them.Thus,the researcher emphasized on their gender, age and educational level.

**Table 4.3: Distribution of respondents by age**

| | Age group | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Valid | 23-30 | 44 | 11.46 | 11.46 |
| | 31-38 | 46 | 11.98 | 23.44 |
| | 39-46 | 112 | 29.17 | 52.60 |
| | 47-54 | 107 | 27.86 | 80.47 |
| | 55-62 | 42 | 10.94 | 91.41 |
| | 63 and above | 33 | 8.59 | 100.00 |
| | **Total** | **384** | **100.00** | |

**Source:** Primary data 2020

The table 4.3 indicates the age groups of respondents and it showed that 29.17% had age between 39-46,27.86 of the respondents are in age group 47-54,11.98% are in age group 31-38,11.46% cover the age group 23-30,10.94% are in age group 55-62 while the rest portion of 8.59% were elder. The results presented in this table indicated that youth participations in rural development project is low due to negative perception that wage and salary are low compare to the other income generating activities. The results presented in this table are in line with Seyfrit *et al*., (2010) who reported that youth migrate out from rural area and natural resources management project had no effect on youth employment enabling.

### 4.1.2. Marital status of respondents

**Table 4.4.Distribution of the respondents by Marital Status**

| | Marital Status | Frequency | Percent | Cumulative Percent |
|---|---|---|---|---|
| Valid | Married | 260 | 67.71 | 67.71 |
| | Single | 51 | 13.28 | 80.99 |
| | Widowed | 73 | 19.01 | 100.00 |
| | Total | 384 | 100.00 | |

**Source:** Primary data 2020

The table 4.4 shows the distribution of age of respondents where 67.71% were married and 13.28 were single. The results revealed a low participation of single people in rural development project and this is because single people are free to move and left the rural area. The results are consistent with Walker and Mathebula, (2020) reported that low income youth migrate to urban.

**Table 4. 5: Distribution of the respondents by level of Education**

| | | **Frequency** | **Percent** | **Cumulative Percent** |
|---|---|---|---|---|
| Valid | No school | 119 | 30.99 | 30.99 |
| | Adult education | 14 | 3.65 | 34.64 |
| | Post-secondary | 6 | 1.56 | 36.20 |
| | Primary | 146 | 38.02 | 74.22 |
| | Secondary | 51 | 13.28 | 87.05 |
| | University | 48 | 12.95 | 100.00 |
| | **Total** | **384** | **100.00** | |

**Source:** Primary data, 2020

As indicated in the table (4.5) the high number of respondents that involve in sustainable woodland management and natural forest restoration project (PGREF) had not attended any school at 34.64% whereas 36.20% had attended postsecondary. 56.25% of respondents have finished a primary school, this implies that many beneficiaries involvement on sustainability of PGReF projects have a lower level of education in spite of 13.28% of secondary and 12.95% of respondents who have a bachelors' degree in different field. The results revealed that rural development project activities are conducted by low percentage of educated people. From the findings, it is possible to conclude that there is a low awareness of PGReF projects because the level of education of project beneficiaries was low. The low level of awareness may have led to the low participation of beneficiaries.

### 4.2. Presentation of findings regarding the involvement of beneficiaries

This section refers to presentation, analysis and interpretation of data in accordance to beneficiaries' involvement on sustainability of rural development project in Rwanda, a case study: sustainable woodland management and natural forest restoration project (PGReF) as the first objective of the study implies.

#### 4.2.1. The extent to which beneficiaries were involved in project planning

The researcher investigated the level of participation of beneficiaries during planning phase of sustainable woodland management and natural forest restoration project (PGReF).Normally, after project design which requires experts in project management, planning phase is introductory phase that welcomes beneficiaries'involvement.As they get acquainted with rationale and objectives of the projects that stimulate their participation in the subsequent phases.

**Table 4.6: Beneficiaries' involvement in planning of PGReF project (n=384)**

| To what extent were beneficiaries involved in planning phase of PGReF project in terms of: | **1** | **2** | **3** | **4** | **5** | **mean** |
|---|---|---|---|---|---|---|
| 1. Generating new ideas | 100 | 0 | 0 | 0 | 0 | 1 |
| 2. Any degree of participation in the project design | 100 | 0 | 0 | 0 | 0 | 1 |
| 3. Commitment to participate in resource mobilization | 17.19 | 19.53 | 18.49 | 14.84 | 29.95 | 3.20 |
| 4. Decide on project location. | 100 | 0 | 0 | 0 | 0 | 1 |
| 5. Identification of the project needs | 100 | 0 | 0 | 0 | 0 | 1 |

**Source:** Primary data, December 2020

The table (4.6) indicates the descriptive statistic on the extent of beneficiaries' involvement in the planning and implementation phases of (PGReF). Respondents were asked to tick (√) as appropriate. (1- No extent 2- to a small extent 3- to some extent 4- to a large extent 5- to a very large extent).as indicated in the table, respondents had no extent in project planning at 100%. Furthermore, beneficiaries had participated in resource mobilization at a very large extent at 29.95% whereas 100% of respondents agreed no extent on deciding project location.

Also 100% of respondents reported a no extent in identification of project needs. Due to their participation in planning phase through resource mobilization which allow beneficiaries to provide information and able to create and find solutions that help in achieving project sustainability this revealed the role of beneficiaries' participation which must affecting PGReF project sustainability. The results are in line with Spilanis et al., (2016) who agreed that identification of low level (beneficiaries) and the Local politics affect the effectiveness by influencing the administration, planning and management of European Regional Development Fund Projects implementation in Greece.

### 4.2.2. The extent to which beneficiaries were involved in project implementation

Project implementation is the core phase of the project life cycle as it reflects a practical execution of activities prescribed in preceding phase of project life circle. As the sustainable woodland management and natural forest restoration project (PGReF) was a large scale project, its beneficiaries obviously participated in several implementation activities. Thus, the following table depicts the views of the respondents on the extent of their participation.

**Table 4.7: Beneficiaries' involvement in implementation of PGReF project (n=384)**

| To what extent were beneficiaries involved in implementation phase of PGReF project? | | | | | | |
|---|---|---|---|---|---|---|
| **Scales** | **1** | **2** | **3** | **4** | **5** | **Mean** |
| 1.Degree of financial contribution | 16.93 | 30.47 | 19.53 | 15.10 | 17.97 | 2.86 |
| 1. Providing labor power | 17.45 | 18.23 | 19.53 | 15.10 | 29.69 | 3.21 |
| 2. Extent beneficiaries' redesign projects | 17.71 | 1.04 | 48.96 | 15.36 | 16.93 | 3.12 |
| 3. Provision of indigenous knowledge | 17.97 | 0.52 | 18.75 | 16.15 | 46.61 | 3.72 |
| 4. Provision of new technology | 16.93 | 15.36 | 19.27 | 30.47 | 17.97 | 3.17 |

**Source:** Primary data, December 2020

Table (4.7) indicates the extent of beneficiaries' involvement in implementation phase of PGReF project. It depicts that 30.47 % of respondents agreed that they have involved in financial contribution at small extent while 29.95% had a very large extent in providing labor forces with mean of 3.21. Likewise, 48.96% of respondents reported to some extent in redesigning project whereas 46.61 % reported the impact of indigenous knowledge at a very large extent with mean of 3.72. Lastly 30.47 % of respondents agreed a large extent in provision of new technology.

Beneficiaries involvement in implementation phase reflect a big effect on in Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) project sustainability as they involved in digging hole, availing seedling, transplanting and planting trees. Based on the results mentioned above beneficiaries' involvement in implementation phase could explain the project sustainability. Results concur with Hough and Prozesky (2012) who proved the evidence indicating that many beneficiaries have become financially dependent on the employment after involving in project implementation.

### 4.2.3. The perception of beneficiaries on the PGReF project sustainability

The researcher investigated the views of the respondents on the benefits that the projects brought to the community as indicators of project sustainability. It reflects the assessment of project objectives achievement as depicted in the following table.

**Table 4.8: Perception of beneficiaries on the PGReF project sustainability (n=384)**

| Do you think that beneficiaries' involvement in the implementation of the Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) has allowed the achievement of the following: | **1** | **2** | **3** | **4** | **5** | **mean** |
|---|---|---|---|---|---|---|
| (1). Increase of forest cover and improve the living conditions of the forest-dependent people. | 17.19 | 17.45 | 19.79 | 15.63 | 29.95 | 3.23 |
| (2). Create the basic conditions that would benefits and payment for ecosystem services. | 17.97 | 17.19 | 20.05 | 14.84 | 30.21 | 3.21 |
| (3). Reducing the huge gap between demand and supply of fuel wood/charcoal, | 17.71 | 16.67 | 20.05 | 15.36 | 30.21 | 3.23 |
| (4). Reducing the gap for the high demand for timber and poles | 17.97 | 17.19 | 20.57 | 14.84 | 29.43 | 3.20 |
| (5). Providing solutions to enhanced levels of erosion, floods and landslides. | 18.23 | 16.93 | 19.53 | 15.63 | 29.69 | 3.21 |
| The beneficiaries' perception to the sustainability of PGReF project are based on the different fact including the listed below. | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. Project beneficiaries' participation in the needs assessment and planning stages of a project is more likely to have behavioral intentions promoting project sustainability than those offered passive participation. | 17.97 | 16.93 | 19.79 | 15.36 | 29.95 | 3.22 |
| 2. Project beneficiaries' participation in the needs assessment and planning stages of a project is likely to experience Psychological Ownership toward the project. | 17.45 | 17.19 | 20.05 | 15.63 | 29.69 | 3.22 |

**Source:** Research Findings, December 2020

The table 4.8 indicates beneficiaries' perception on the Woodland Management and Natural Forest Restoration Project (PGReF) project sustainability. Respondents were asked to tick (√) once appropriate number their matching of involvement as follows: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree. Findings shows that 29.95 % of respondents agreed strongly agreed that beneficiaries' involvement in PGReF project allowed the increase of forest cover and improve the living conditions of the forest-dependent people. It also displays that 30.21 % of respondents with mean 3.21 strongly agreed that beneficiaries' involvement allow creations of the basic conditions that would benefits and payment for ecosystem services whereas 30.21% of respondents strongly agreed reduction of the huge gap between demand and supply of fuel wood/charcoal due to beneficiaries' involvement.

In addition, the table indicates that 29.43 % of respondents strongly agreed that beneficiaries' involvement has allowed the reduction of the gap for the high demand for timber and poles whereas 29.69% of respondents strongly agreed that provision of solutions to enhanced levels of erosion, floods and landslides. Results indicated that 29.95% of respondents with mean of 3.22 strongly agreed that beneficiaries' involvement allowed project beneficiaries' participation in the needs assessment and planning stages of a project is more likely to have behavioral intentions promoting project sustainability than those offered passive participation whilst 29.69% of respondents with mean 3.22 strongly agreed that project beneficiaries' participation in the needs assessment and planning stages of a project is likely to experience Psychological Ownership toward the project.

Results revealed that beneficiaries' involvement allowed the achievements of different objectives' and favored project sustainability. The results are consistent with Kim *et al*., (2020) who found that, the higher involvement of the beneficiaries' leads to better results in the assessment of project outcome and revealed that the participation of the beneficiaries has a positive impact on the projects performance.

### 4.2.4. The factors that promote beneficiaries' participation in PGReF activities

Beneficiaries' participation requires interaction among all parties that are involved in the overall project life circle. It therefore relies on cooperation, dynamism of the community, capacity building and other values. The respondents disclosed the factors that enhance the effective involvement of beneficiaries as shown in the following table.

**Table 4.9: Factors that promote beneficiaries' participation in PGReF (n=384)**

| The influence factors which have been affecting the continuity of project (PGReF) | **1** | **2** | **3** | **4** | **5** | **mean** |
|---|---|---|---|---|---|---|
| 1. Adequate funding | 17.45 | 30.21 | 20.05 | 15.36 | 16.93 | 2.84 |
| 2. Adequate training in the project | 41.15 | 7.81 | 19.53 | 15.10 | 16.41 | 2.57 |
| 3. Community good will | 17.71 | 19.01 | 17.19 | 16.15 | 29.95 | 3.21 |
| 4. Effective cooperation | 17.19 | 15.36 | 19.79 | 29.95 | 17.71 | 3.15 |
| 5. Effective management of the project | 16.15 | 17.97 | 19.79 | 15.89 | 30.21 | 3.26 |
| How beneficiaries' involvement in project activities could be integrated and motivated? | | | | | | |
| 1. General assembly | 40.63 | 17.71 | 20.05 | 15.10 | 6.51 | 2.16 |
| 2. Partner meetings | 17.97 | 15.36 | 19.79 | 29.95 | 16.93 | 2.98 |
| 3. Chain meeting | 16.93 | 15.10 | 20.05 | 30.47 | 17.45 | 3.02 |
| 4. Bottom up communication | 17.71 | 15.36 | 20.05 | 29.95 | 16.93 | 2.99 |

**Source:** Research Findings, December 2020

Table 4.9 illustrates the response of respondents on the factors that influence their participation in PGReF activities. Likert scale was used to capture their point of view. They were asked to tick (√) once appropriate number matching their level of involvement as follows: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree. The results indicated that 30.21% of respondents agreed that adequate funding affect their involvement whereas 41.15 % of respondents strongly agreed that adequate training in the project affect their involvement. Moreover,29.95 % of respondents strongly agreed that of community good will influence their involvement while 29.5% agreed that effective cooperation influences their participation. Lastly 30.21 % of respondents strongly agreed that effective management of the project influence their low participation.

Furthermore**,** table 4.9 indicates that 40.63 % of respondents with mean of 2.16 strongly disagreed that general assembly could not integrate and motivate their involvement whilst 29.95 % of respondents strongly agreed that partner meetings integrated and motivated their involvement. Likewise, 30.47% of respondents agreed that chain meeting influence their participation while 29.95% agreed that bottom up communication influence their involvement in (PGReF).

Inadequate funding and training had not motive beneficiaries' involvement because of low awareness of the source of funding and project owners are who know whether beneficiaries need training before project kick off. However, lack of community good will, lack of cooperation and poor management motive beneficiaries' participation because they are ensuring to be served by the projects outcomes. The results are similar to Bayiley and Teklu, (2016) concluded using principal component analysis the specific set of four factors for projects funded by EU such as intellectual capital, sound project case, key manpower competency and effective stakeholder engagement.

### 4.2.5. Advantages inherent to beneficiaries' involvement

The researcher investigated the views of the respondents on the advantages they enjoy by participating in their implementation of rural development project. The following table shows the relevant results.

**Table 4.10: Advantage of beneficiaries 'involvement in PGReF project (n=384)**

| Indicators of advantage of beneficiaries' involvement in PGReF project. | 1 | 2 | 3 | 4 | 5 | Mean |
|---|---|---|---|---|---|---|
| 1. Wage and salary | 17.97 | 16.93 | 15.36 | 19.79 | 29.95 | 3.26 |
| 2. Job creation | 17.19 | 16.93 | 15.63 | 20.05 | 30.21 | 3.29 |
| 3. Financial performance (return on investments, profitability) | 18.23 | 20.05 | 15.63 | 28.91 | 17.19 | 3.06 |
| 4. Natural resources management | 18.75 | 17.71 | 15.89 | 30.47 | 17.19 | 3.09 |
| 5. Biodiversity protection | 17.97 | 19.01 | 15.89 | 30.21 | 16.93 | 3.09 |
| 6. Climate strategy and governance | 16.67 | 15.63 | 17.45 | 30.21 | 20.05 | 3.21 |
| 7. Labor practices | 17.19 | 17.71 | 19.01 | 15.89 | 30.21 | 3.24 |
| 8. Relationships with the local community | 18.23 | 20.57 | 28.65 | 15.36 | 17.19 | 2.92 |

As highlighted by respondents, beneficiaries' involvement led to different important aspect including wage and salary that help them in their daily life,job opportunities, means of investment to generate a profit, labor practice and strengthening a relationship with the community .Similar results were found by Aga *et al*., (2018) revealed that active involvement of project beneficiaries during the needs assessment and planning stages has a significant positive influence on the behavioral intentions of the project beneficiaries toward project sustainability

### 4.2.6. The strategies to enhance beneficiaries' involvement

This subsection represents analysis and interpretation of data regarding the strategies that should be envisaged to enhance involvement of beneficiaries in project implementation process just to enhance also the sustainability of project. Relevant views disclosed by the respondents are illustrated in the following table.

**Table 4.11: Strategies to enhance beneficiaries' involvement in PGReF (n=384)**

| The best strategies used in beneficiaries' involvement | 1 | 2 | 3 | 4 | 5 | Mean |
|---|---|---|---|---|---|---|
| 1. Inclusion of participatory expert in mission team | 17.97 | 15.10 | 16.93 | 29.95 | 20.05 | 3.19 |
| 2. Information sharing strategy | 18.49 | 14.84 | 16.41 | 30.21 | 20.05 | 3.18 |
| 3. Consultation strategies | 17.19 | 16.93 | 20.05 | 15.10 | 30.73 | 3.25 |
| 4. Decision–Making strategies | 17.71 | 19.27 | 16.93 | 15.63 | 30.47 | 3.21 |
| 5. Initiating action strategies | 17.97 | 29.95 | 19.79 | 15.10 | 17.19 | 2.83 |
| 6. periodic informal exchange of view | 18.23 | 15.36 | 5.21 | 35.68 | 25.52 | 3.34 |
| 7.First meeting before the project start | 17.71 | 17.45 | 14.84 | 20.05 | 29.95 | 3.27 |
| 8.The existence of contract signed between beneficiaries and project staff explaining responsibility | 17.97 | 15.36 | 19.79 | 29.95 | 16.93 | 3.12 |
| 9.participatory in identification of beneficiaries | 17.45 | 17.71 | 14.84 | 19.79 | 30.21 | 3.27 |
| 10.Creation of community based organization | 17.97 | 19.27 | 15.10 | 29.95 | 17.71 | 3.10 |

**Source:** Researcher's computed from SPSS, December 2020

Table 4.11 compiles the results finding on the strategies to ensure beneficiaries involvement. Respondents were asked to tick (√) once appropriate number matching their level of involvement as follows: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree. Results indicated that 29.95%, 30.73 % and 35.68 % of respondents agreed that Inclusion of participatory expert in mission team, Information sharing strategy and periodic informal exchange of view as strategies to include beneficiaries respectively. In addition, 30.73 % and 30.47% of respondents strongly agreed that Consultation strategies and Decision–Making strategies as strategies whereas 29.95 % of respondents disagreed that Initiating action strategies to involve beneficiaries.

Also the table indicates that 29.95 % of respondents agreed that the existence of contract signed between beneficiaries and project staff explaining responsibility and Creation of community based organization were strategies to enhance beneficiaries' involvement whereas 29.95% and

30.21 % of respondents strongly agreed that First meeting before the project start and participatory in identification of beneficiaries were strategies for their involvement.

Respondents were asked to tick (√) once appropriate number matching whether Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) is sustainable and they rated as follows: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree. Results indicated that 29.43 % of respondents strongly agreed that the project recognized sustainability in the site where it was implemented.

### 4.2.6. Indicators of sustainability of PGReF project

Sustainability implies that after the project implementation and achieving the required objectives, the project undergoes a long run to keep up supporting beneficiaries. In this context, implementation is executed by project managers, project sponsors and doners.After implementation rural development projects are obviously managed by the community out of project designers, donors and managers who ought to be substituted by members of the community. It compulsorily requires effective implementation process of exit strategy that implies integration process of community members to undertake projects management tasks. Project management theories state that there is a firm connection between exit strategy and sustainability of project. Exit strategy is a strategy of paramount importance as its effective implementation leads to long run of the project. Thus, on the course of this study, the researcher investigated the how exit strategy was implemented and project sustainability.

**Table 4.12: Exit strategy and project sustainability of (PGReF) in Rwanda (n=384)**

| **Application of exit strategy and sustainability (PGReF)** | **1** | **2** | **3** | **4** | **5** | **Mean** |
|---|---|---|---|---|---|---|
| 1. Effective implementation of exit strategy | 16.93 | 15.36 | 20.05 | 30.47 | 17.19 | 3.15 |
| 2.The project kept up running after exit strategy | 18.23 | 16.93 | 19.79 | 15.10 | 29.95 | 3.21 |
| 3.The project was managed by the community after exit | 16.93 | 17.19 | 20.31 | 15.10 | 30.47 | 3.25 |
| 4. The community is still involved in the management of (PGReF) project | 17.45 | 20.05 | 29.95 | 15.63 | 16.93 | 2.94 |
| 5.The project is sustainable as it has achieved strategic objectives in forestry and social Economic development of beneficiaries. | 17.71 | 17.19 | 19.79 | 15.10 | 30.21 | 3.22 |

**Source:** Research Findings, December 2020

Table 4.12 illustrates the views of the respondents on the indicators of sustainability. As shown in the table, it is found out that the project managers applied effectively exit strategy mean==3.15, after exit strategy, the project is still running mean=3.21 and is being managed by the community mean=3.25.Currently, the beneficiaries are still involved in management of the community after withdrawal of funds extended by Rwanda Water Forestry Authority mean=3.25.The participants profoundly asserted that PGReF project is sustainable as it has achieved strategic objectives in forestry and social Economic development of beneficiaries and currently still running. These findings are in the line with the views of (Rogers and Macias, 2004) who asserted that an exit strategy for a project is a specific plan defining how a sponsor intends to get out from a region as well by making sure that the projects' achieved development goals are not jeopardized and that further progress towards these goals will be made. The findings presented in this table make evidence proving the sustainability of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF).

### 4.3. Regression analysis

#### 4.3.1. Regression analysis between project sustainability and effective exit strategy

The analysis indicated positive coefficient between PGReF sustainability and implementation of exit strategy and showed that beneficiaries' involvement in phase affect significantly ($p=0.04$) the sustainability. The simulation could be explained by the equation $Y= 0.17+ 0.43X$ whereas Y represents PGReF sustainability and X represents effective implementation of exit strategy. Similar results were found by Eriksson et al., (2018) illustrated factors to support successful implementation and sustain effects of community-based strategies in projects in low- and middle-income settings and noted that Beneficiaries participation promote and sustain knowledge implementation.

**Table 4.13: Regression analysis between PGReF sustainability and effective exit strategy**

| Logistic regression | | Number of obs | = 382 | | |
|---|---|---|---|---|---|
| | | LR chi2(1) | = 4.19 | | |
| | | Prob > chi2 | = 0.0407 | | |
| Log likelihood = -262.16491 | | Pseudo R2 | = 0.0079 | | |
| Sustainability status | Coef. | Std. Err. | Z | P>z | [95% Conf. Interval] |
| Effective exit strategy | 0.4385758 | 0.214901 | 2.04 | 0.041 | .0173769 .8597747 |
| _cons | 0.176930 | 0.172170 | -1.03 | 0.304 | -.5143779 .1605165 |

**Source:** Researcher's computed from SPSS, December 2020

### 4.3.2. Regression analysis between project sustainability and community involvement

The analysis indicated that community involvement and PGReF sustainability had positive coefficient and showed that resource mobilization affected less significantly (p=0.77). The simulation of PGReF sustainability could be explained by the equation Y=0.06 + 0.06X where Y represents sustainability of project and X represents beneficiaries' involvement. The results are in the line of (Luvenga et al., 2015) who asserted that Project can be sustainable when the community is capable on their own with no other assistance of external partners, to keep producing results they benefit for the period their problem are there.

**Table 4.14: Regression analysis between PGReF sustainability and community involvement**

| Logistic regression | | Number of obs | = 382 | | |
|---|---|---|---|---|---|
| | | LR chi2(1) | = 0.08 | | |
| | | Prob > chi2 | = 0.7772 | | |
| Log likelihood = -264.21839 | | Pseudo R2 | = 0.0002 | | |
| Sustainability status | Coef. | Std. Err. | Z | P>z | [95% Conf. Interval] |
| Community involvement | 0 .0616497 | 0.2178631 | 0.28 | 0.777 | -.3653541 .4886536 |
| _cons | 0 .0635134 | 0.178264 | 0.36 | 0.722 | -.2858776 .4129044 |

**Source:** Primary data from SPSS, December 2020

### 4.3. Test hypothesis

Null hypothesis stipulating that there is no statistical significance between the two variables and the alternative hypothesis that proves a statistical significance between beneficiaries' participation and project sustainability were tested as depicted in the following tables.

**Table 4.15: Standardized coefficient of null hypothesis**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Confidence level(95%) | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | | |
| 1 | Non involvement | .191 | .279 | | .686 | .494 | -2.78 | 2.09 |
| | | .426 | .096 | .417 | 4.426 | .000 | -.566 | 2.01 |

a. Dependent Variable: Project sustainability

As the rule of thumb asserts that two variables are statistically significant when their P-values are between 0 to 0.05 and the P-value indicated in the table is 0.494 and 000 which is higher than the standards, the researcher found out that the two variables are not statistically significant. Thus, on the basis of these findings, this hypothesis stipulating that there is no relationship between beneficiaries' involvement and project sustainability is verified and rejected by the researcher.

**Table 4.16: Verification of the second hypothesis**

**ANOVA**

| | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
|---|---|---|---|---|---|
| Beneficiaries involvement | 152.557 | 5 | 38.139 | 357.780 | .000 |
| Sustainability | 40.401 | 379 | .107 | | |
| Total | 192.958 | 384 | | | |

**Source:** Primary data

The anova table indicates that the P-value is 000 which indicates that the two variables are statistically correlated. It implies that the beneficiaries' involvement contributes to the sustainability of the project under study.

| Model | | Un standardized Coefficients | | Standardized Coefficients | T | Sig. | Confidence level (95%) | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std.Error | Beta | | | -1.51 | 2.11 |
| 1 | Sustainability | .659 | .139 | .671 | 4.748 | .000 | -.566 | 2.06 |
| | Beneficiaries involvement | .718 | .091 | .633 | 7.883 | .000 | | |

a. Dependent Variable: Project sustainability

The table 4.16 verifies the relationship between beneficiaries' participation and project sustainability As shown by the table, beneficiaries participation has been considered as the predictor. It is seen that the level of project sustainability increase from 0.66 plus involvement times 0.7. As the rule of thumb asserts that significant correlation between two variables should be ranked between 0 to 0.5 and the P-value indicated in the table are 0.000 and 000, the researcher found out that there is a significant relationship between beneficiaries involvement and project sustainability. Thus, on the basis of these findings, this hypothesis stipulating that there is a relationship beneficiary's involvement and project sustainability is verified and confirmed. This implies that the achievement of objectives that was evaluated effective of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) and its sustainability disclosed moderate on the course of this study depend adequately on the involvement of beneficiaries during project implementation.

### 4.4. Measuring intervening variables

Prior to data collection, the researcher had anticipated the extraneous variables that influence the involvement of beneficiaries in rural development project that are the government policy and national laws and regulations. To investigate the impact of these pre-defined extraneous variables, the researcher applied documentary technique. The findings prove that the government policy regarding agro-forestry support effectively forest preservation and the paramount role of the community in forestry preservation. This implies that the community

needs to participate actively in rural development projects aiming at promoting forest preservation.

The impact of government of Rwanda policy towards promotion of Agro-forestry if further justified by the fact that the project design was consistent with Rwanda's strategic objectives in forestry and social economic development generally. Rwanda's strategic objectives in forestry include, among others:

Increasing and diversifying national forest and agroforestry resources (Vision 2020 and forest policy); conserving and sustainably rehabilitating forest and agroforestry resources (national poverty reduction strategy-EDPRS and forest policy); assessing the contribution of goods and services provided by the forestry sector to the national economy (forest policy); and developing an agriculture that seeks to preserve the environment and natural resources (National Agricultural Policy).

# CHAPTER FIVE

# SUMMARY MAJOR FINDINGS, CONCLUSION AND SUGGESTIONS

## 5.0. Introduction

This chapter refers to the summary of major findings of the study that enabled the researcher to achieve the objectives of the study and to respond to the questions that guided this research. On the major findings, the general conclusion was made and relevant recommendations.

## 5.1 Presentation of major findings

This section refers to the presentation of major findings extracted from data presentation and analysis presented in chapter four of this study. The key findings were presented respectively to the specific objectives of this study.

### 5.1.1. Findings regarding the first objective

The first objective sought to ascertain the extent to which beneficiaries are involved in the implementation of Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) activities. The findings of the study revealed that the beneficiaries participated considerably in implementation of the project as 29.95% had a very large extent in providing labor forces with mean of 3.21. Likewise, 48.96% of respondents reported to some extent in redesigning project whereas 46.61 % reported the impact of indigenous knowledge at a very large extent with mean of 3.72. Lastly 30.47 % of respondents agreed a large extent in provision of new technology.

### 5.1.2. Findings pertaining the second objective

The second objectives of the study sought investigate the perception of beneficiaries on the project sustainability. Findings shows that 29.95 % of respondents agreed strongly agreed that beneficiaries' involvement in PGReF project allowed the increase of forest cover and improve the living conditions of the forest dependent people. It also displays that 30.21 % of respondents with mean 3.21 strongly agreed that beneficiaries' involvement allow creations of the basic conditions that would benefits and payment for ecosystem services whereas 30.21% of respondents strongly agreed reduction of the huge gap between demand and supply of fuel wood/charcoal due to beneficiaries' involvement. In addition, the table indicates that

29.43 % of respondents strongly agreed that beneficiaries' involvement has allowed the reduction of the gap for the high demand for timber and poles whereas 29.69% of respondents strongly agreed that provision of solutions to enhanced levels of erosion, floods and landslides. Results indicated that 29.95% of respondents with mean of 3.22 strongly agreed that beneficiaries' involvement allowed project beneficiaries' participation in the needs assessment and planning stages of a project is more likely to have behavioral intentions promoting project sustainability than those offered passive participation whilst 29.69% of respondents with mean 3.22 strongly agreed that project beneficiaries' participation in the needs assessment and planning stages of a project is likely to experience Psychological Ownership toward the project.

### 5.1.3. Findings pertaining the third objective

The third objective of this study sought to identify factors that influence beneficiaries' participation in project activities. The findings asserted that the factors that hinder the participation of the beneficiaries are inadequate funding affect their involvement, inadequate training in the project affect their involvement , lack of community good will influences their involvement, lack of cooperation influence their participation and poor management of the project influence their low participation.

### 5.1.4. Findings regarding the fourth objective

The study also sought to examine the advantages of beneficiary involvement in project sustainability in Rwanda. The results indicate that beneficiaries' involvement led to different important aspect including wage and salary that help them in their daily life,job opportunities, means of investment to generate a profit, labor practice and strengthening a relationship with the community .

### 5.1.5. Findings pertaining the fifth objective

The study assessed the strategies for beneficiary involvement to enhance project sustainability. Results indicated that 29.95%, 30.73 % and 35.68 % of respondents agreed that Inclusion of participatory expert in mission team, Information sharing strategy and periodic informal exchange of view as strategies to include beneficiaries respectively. In addition, 30.73 % and 30.47% of respondents strongly agreed that Consultation strategies and Decision–Making strategies as strategies whereas 29.95 % of respondents disagreed that Initiating action strategies to involve beneficiaries.

The analysis indicated effective implementation of exit strategy has low significant (p=0.09) effect on project sustainability but has positive coefficient with sustainability. The sustainability of could be simulated by Y= 0.34+ 0.36X also the analysis indicated positive coefficient between PGReF sustainability and implementation phase and shoed that beneficiaries' involvement in implementation phase affect significantly (p=0.04) the sustainability. The simulation could be explained by the equation Y= 0.17+ 0.43X in addition the analysis indicated that community involvement and PGReF sustainability had positive coefficient and showed that resource mobilization affected less significantly (p=0.77). The simulation of PGReF sustainability could be explained by the equation Y=0.06 + 0.06X

## 5.2 Conclusion

Beneficiaries' involvement is the cornerstone of rural project performance, without urgent prioritization of the involvement of the intended beneficiaries or people concerned in rural development initiatives; it would be difficult to achieve rural project performance and sustained rural growth. Beneficiaries' involvement played a great role in promoting Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) sustainability as the project managed to respond adequately to its objectives including increasing and diversifying national forest and agroforestry resources ,conserving and sustainably rehabilitating forest and agroforestry resources, enabling beneficiaries to enjoy services provided by the forestry sector to develop an agriculture that seeks to preserve the environment and natural resources.

Sustainability implies that after the project implementation and achieving the required objectives, the project undergoes a long run to keep up supporting beneficiaries. Project management theories state that there is a firm connection between exit strategy and sustainability of project. Exit strategy is a strategy of paramount importance as its effective implementation leads to long run of the project. In this context, implementation is executed by project managers, project sponsors and doners.After implementation, the project under study was obviously managed by the community out of project after withdrawal of funds extended by donors. It compulsorily requires effective implementation of exit strategy that implies integration process of community members to undertake projects management tasks

## 5.3 Suggestions

Beneficiaries' involvement in forestry project is a cornerstone towards project sustainability as stated by several authors.However,the extent to which participation is done is facultative from one project to another as it depends of project implementers who extend a suitable platform that stimulates beneficiaries in project implementation adequately.Moreover,the exit strategy that rely on the capacity building and decentralization of project management activities contribute to effective integration of project beneficiaries. In this context, in this regards, the findings disclosed by the study indicate shortage of some dimensions indicating involvement of beneficiaries in Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) like the analysis indicated effective implementation of exit strategy has low significant (p=0.09). effect on project sustainability but has positive coefficient with sustainability, lack of participation during project implementation, Low mean proving inadequate in training in the project mean=2.57,the assertion regarding that the community is still involved in the management of (PGReF) project is moderate mean=2.94. As the involvement of beneficiaries towards the sustainability is not at the excellent appraisal, the researcher suggests the following:

### 5.3.1 Suggestions to the government

The theories presented in this study revealed that participation approaches should be designed and extended by project implementers and the beneficiaries should participate accordingly. As the study disclosed that involvement of beneficiaries was moderate, it implies that the slight gap should be bridge by project designers and implemented as exhibited by the literature. On the basis of these findings, the researcher suggests the following to the government.

- The government should raise awareness through campaigns to sensitize the beneficiaries' right and obligation to participate rural development project.
- The government should explore possibilities of putting in place a private-public partnership framework though private investors can be brought on board to support the sustainability of the planted forests.
- The government should promote full participation of beneficiaries in the participatory planning workshops.

### 5.3.2 Suggestions to the PGReF beneficiaries

The PGReF beneficiaries should:

- As the study revealed that the beneficiaries hold low level of education, the researcher suggests the beneficiaries to attend different form of education because increasing level of education might increase their level of analysis and also they cannot develop themselves when they are illiterate.
- The projects were sustainable and success ascended through the prioritization of planning, training and community-building from the commencement of the project.
- The beneficiaries' involvement should translate into implemented project success; trust isn't the only issue that must be handled.
- The beneficiaries are encouraged to keep the sense of project ownership developed since the beginning even after the closing of the project so that they could continue benefit from it.

### 5.3.3 Suggestions to the project staff

- On the basis of findings revealed by the study, the researcher ensured that the project exerted a moderate participation of the beneficiaries as there has been a moderate sustainability.The project management committees should encourage the participation of beneficiaries in generating new idea, determining the location of the projects. Furthermore, awareness campaigns to sensitize the beneficiaries' right and obligation to participate rural development project should be carried out.
- Trust between the implementing organization and local beneficiaries can assist projects to meet their potential and for the corresponding local community to believe and participate fully as stakeholders in the process of project development.
- Make sure everyone on the team understands what's expected and can use the technology you've selected. Beyond the method of communication, make sure to set clear expectations and guidelines on the kinds of information that need to be communicated.

### 5.3.4 Suggestions for further research

- Further research should assess factors affecting youth participation in rural community based projects.

- Effectiveness of exit strategy on the performance of rural development projects in Rwanda.

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# APPENDICES

# QUESTIONNAIRE

**Letter for Respondents**

Dear respondent,

Re: Data collection

I am **Micheline UMUBYEYI**, a postgraduate at University of Rwanda. I am conducting a research on the topic entitled the "**Analysis of beneficiaries involvement on sustainability of rural development project in Rwanda** "A case study: Sustainable Woodland Management and Natural Forest Restoration Project (PGReF). This research will allow me to fulfill the requirements for the Award of the Degree of Master.

I kindly request you to answer the question below. The purpose of this survey is entirely academic and the information you are going to give will absolutely be confidential and it will be used in this research only.

**Thank you for your kind collaboration!**

**QUESTIONNAIRE:**Adapted questionnaire from The Preparatory Survey for the Project of Sustainable Forest Management in the Northwest Sub-region in the Socialist Republic of Vietnam and Guidance and survey modules for measuring the multiple roles of forests in household welfare and livelihoods (FAO, CIFOR, IFRI and World Bank. 2016)**.**

**Section A: Respondent biodata**

**1. Personal information**

This section has to be complete by each respondent.

1.1 Place of living…….

1.2 District…….

1.3 Interviewee number……..

**2. Demographic information**

Please insert (√) against appropriate letter matching your category.

2.1 Gender

A. Male

B. Female

2.2 What is your current Age?

23-30 ( ) 31-38 ( ) 39-46 ( ) 47-54( ) 55-62 ( ) 63>( )

2.3. What is your current marital status?

Single ( ) Married ( ) Divorced ( ) Widow ( ) Single parent ( )

2.4. What is your education level?

None ( ) primary education ( ) Secondary complete ( )

Secondary incomplete ( ) Tertiary education ( ) University ( )

**Section B. Attempts all questions**

Please tick (√) as appropriate. (1- No extent 2- to a small extent 3- to some extent 4- to a large extent 5- to a very large extent)

| | | | | | | |
|---|---|---|---|---|---|---|
| Q 1 | To what extent were beneficiaries involved in planning phase of PGReF project in terms of: | 1 | 2 | 3 | 4 | 5 |
| | 1. Generating new ideas? | | | | | |
| | 2. Their degree of participation in the project design? | | | | | |
| | 3. Commitment to participate in resource mobilization | | | | | |
| | 4. Decide on project location | | | | | |
| | 5. Identification of the project needs | | | | | |
| Q2 | To what extent were beneficiaries involved in implementation phase of PGReF project? | | | | | |
| | 1. Degree of financial contribution | | | | | |
| | 2. Providing labor power | | | | | |
| | 3. Extent beneficiaries' redesign project**s** | | | | | |
| | 4. Provision of indigenous knowledge | | | | | |
| | 5. Provision of new technology | | | | | |
| Q3 | To what extent of PGReF project linkages to beneficiaries? | | | | | |
| | 1. Adequacy of communication from project team | | | | | |
| | 2. Degree of increased beneficiary capacity | | | | | |
| | 3. Beneficiaries' representatives | | | | | |
| | 4. Briefing sessions and document on participatory development | | | | | |

Please tick (√) once appropriate number matching your level of involvement 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree).

| **Q4** | Do you think that beneficiaries' involvement in the implementation of the Sustainable Woodland Management and Natural Forest Restoration Project (PGReF), has allowed the achievement of the following: | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| | **1.** Project objectives met | | | | | |
| | **2.** Increasing income level | | | | | |
| | **3.** Improved livelihood | | | | | |
| | 4. profits continuity | | | | | |
| | 5. beneficiaries empowered | | | | | |

**Q5.** How often do you think the project could provide the benefits to the beneficiaries?

a. Every week [ ]

b. Once a month [ ]

d. Twice a year [ ]

e. Others (specify)_____

Please tick (√) once appropriate number matching your level of involvement as follows: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree.

| **Q6** | Do you think that beneficiaries' involvement in the implementation of the Sustainable Woodland Management and Natural Forest Restoration Project (PGReF), has allowed the achievement of the following: | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|---|
| | (1). Increase forest cover and improve the living conditions of the forest-dependent people. | | | | | |
| | (2). Create the basic conditions that would benefits and payment for ecosystem services. | | | | | |
| | (3). Reducing the huge gap between demand and supply of fuel wood/charcoal, | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | (4). Reducing the gap for the high demand for timber and poles | | | | | |
| | (5). Providing solutions to enhanced levels of erosion, floods and landslides. | | | | | |
| **Q7** | The beneficiaries' perception to the sustainability of PGReF project are based on the different fact including the listed below. | | | | | |
| | 1. Project beneficiaries' participation in the needs assessment and planning stages of a project is more likely to have behavioral intentions promoting project sustainability than those offered passive participation. | | | | | |
| | 2. Project beneficiaries' participation in the needs assessment and planning stages of a project is likely to experience Psychological Ownership toward the project. | | | | | |
| **Q8** | To what extent would you agree with the following factors to influence beneficiary's participation which have been affecting the continuity of projects (PGReF)? | | | | | |
| | 1. Inadequate funding | | | | | |
| | 2.Inadequate training in the project | | | | | |
| | 3.Lack of community good will | | | | | |
| | 4.Lack of cooperation | | | | | |
| | 5.Poor management of the project | | | | | |
| | 6.Absence of strategic planning | | | | | |
| | 7.Poor networking and communication | | | | | |

Please tick (√) once appropriate number matching your level of involvement as follows: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Q9 | How beneficiaries' involvement in project activities could be integrated and motivated? | 1 | 2 | 3 | 4 | 4 | 5 |
| | 5. General assembly | | | | | | |
| | 6. partner meetings | | | | | | |
| | 7. chain meeting | | | | | | |
| | 8. bottom up communication | | | | | | |
| Q10 | The following activities would be carried out to ensure continuity of beneficiaries' involvement in the project (PGReF). | | | | | | |
| | 1. Involvement of beneficiaries in decision making process | | | | | | |
| | 2. Training of the beneficiaries in leadership | | | | | | |
| | 3. Transparency and accountability in all the activities of the project | | | | | | |
| | 4. Adequate funding. | | | | | | |
| Q11 | What were the advantages of Beneficiary involvement in (PGReF) project | | | | | | |
| | 1.Group strengthening | | | | | | |
| | 2. Responsiveness | | | | | | |
| | 3. Capacity building and problem solving | | | | | | |
| | 4.problem sharing | | | | | | |
| | 5.Benefit sharing and sustainability | | | | | | |
| Q12 | What were the disadvantages of Beneficiary involvement in (PGReF) project? | | | | | | |
| | 1. Some beneficiary member might benefit more than other | | | | | | |
| | 2. It may lead to delayed start of project | | | | | | |
| | 3. It entails an increased requirement of material as well as human resources | | | | | | |

Please tick (√) once appropriate number matching your level of involvement (1: Very important). (2: Important), (3: So-So), (4: Less important) and (5: Not important).

| | | | | | | |
|---|---|---|---|---|---|---|
| **Q13** | Which of the following indicate the advantage of beneficiaries' involvement in PGReF project? | 1 | 2 | 3 | 4 | 5 |
| | 9. Wage and salary | | | | | |
| | 10. Job creation | | | | | |
| | 11. Financial performance (return on investments, profitability) | | | | | |
| | 12. Natural resources management | | | | | |
| | 13. Biodiversity protection | | | | | |
| | 14. Climate strategy and governance | | | | | |
| | 15. Labor practices | | | | | |
| | 16. Relationships with the local community | | | | | |
| | 17. Financing and construction of social action | | | | | |
| Q14 | What were the strategies to enhance beneficiaries' involvement in project (PGReF) | | | | | |
| | 1.First meeting before the project start | | | | | |
| | 2. The existence of contract signed between beneficiaries and project staff explaining responsibility | | | | | |
| | 4.participatory in identification of beneficiaries | | | | | |
| | 5.Creation of community based organization | | | | | |

Please tick (√) once appropriate number matching your level of involvement as follows: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5 =Strongly Agree.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Q15** | Identify the best strategies used in beneficiaries' involvement in your area? | **1** | **2** | **3** | **4** | **5** |
| | 6. Inclusion of participatory expert in mission team | | | | | |
| | 7. Information sharing strategy | | | | | |
| | 8. Consultation strategies | | | | | |
| | 9. Decision–Making strategies | | | | | |
| | 10. Initiating action strategies | | | | | |
| | 11. periodic informal exchange of view | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Q16** | Is Sustainable Woodland Management and Natural Forest Restoration Project (PGReF) sustainable in your area | | | | | |

**Thank you**