

**COMMUNITY PARTICIPATION AND PERFORMANCE OF FOREST
CONSERVATION PROJECTS: A CASE OF KODERA COMMUNITY FOREST
ASSOCIATION IN RACHUONYO SOUTH SUB-COUNTY, HOMA BAY COUNTY –
KENYA.**

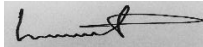
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**This research report has been submitted to partially meet the requirements for obtaining
the degree of Master of Arts in Project Planning and Management at the University of
Nairobi.**

2023

DECLARATION

This Research Project is my original work and has not been submitted for examination in any university or academic institution. All sources referenced and cited in this project are duly acknowledged and acknowledged per the appropriate academic citation guidelines.


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Date 28.8.2023

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This Research Project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I would like to extend a heartfelt dedication to Mr. and Mrs. Aduda, for the dedication, inspiration, and encouragement in my academic journey. Additionally, I offer this work as a tribute to my cherished colleagues, who contributed significantly in shaping the strong foundation upon which my personal and educational growth stands today. It is within this nurturing environment that I have evolved into the individual I am, and I am sincerely grateful to each one of you. May you all be blessed abundantly.

ACKNOWLEDGEMENT

It's been an honor and privilege working with Dr. Joash Migosi, my supervisor. His immense assistance has been instrumental in ensuring that my project fulfills all necessary criteria for its presentation.

Without the help of my classmates, the atmosphere in the classroom would not have been conducive to productive lectures. Even when things appeared to be challenging, they offered moral support and encouragement. Thanks to Mr. Erick Aduda and everyone else involved in the success of my course and the research I am doing for their support, understanding, and unending encouragement throughout.

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LIST OF ABBREVIATIONS

| | |
|-------|--------------------------------------------------------|
| CPRC | : Chronic Poverty Research Centers |
| IUCN | : Union For Conservation of Nature |
| CFM | : Community Forest Management |
| PFM | : Participatory Forest Management |
| KFS | : Kenya Forest Service |
| CFA | : Community Forest Association |
| CBOs | : Community based Organizations |
| NGOs | : Non-governmental Organizations |
| REDD | : Reduced emissions from deforestation and degradation |
| M & E | : Monitoring and Evaluation |

ABSTRACT

The increasing significance of encouraging community engagement has emerged as a crucial focal point in both the realm of governance and the administration of forests and other natural resources. Forests hold economic, social, and environmental value, contributing to the enhancement of natural systems within the environment and the improvement of living standards. This is evident as about 1.7 billion people, both directly and indirectly, derive their livelihoods from forestry resources and products. However, despite the significant role that forests play in enhancing the quality of life and the environment, forest degradation remains a pressing global issue, negatively impacting millions of lives. In response to these challenges, communities have established Community Forest Associations (CFAs) as a means to collaborate with entities like the Kenya Forest Service (KFS) through administrative agreements. However, despite the establishment of CFAs, deforestation and the reduction of the world's forest cover continue to persist. This backdrop highlights the need for rigorous investigation into the impact and significance of community participation in forest conservation initiatives, such as in the case of Kodera Forest in Homabay County. The research aims to assess the role of community participation and provide practical recommendations for establishing an effective framework to bolster forest conservation efforts. The objectives of the study were threefold: first, to ascertain the significance of community participation in project implementation on the performance of the Kodera Forest conservation project; second, to examine the influence of community participation in project governance on the project's overall performance; and third, to evaluate the impact of community involvement in monitoring and assessing the effectiveness of the Kodera Forest protection project. Employing a descriptive survey research design, the investigation selected a sample of 200 household heads from a population of 400 households residing adjacent to the Kodera Forest, using a combination of stratified random selection and basic random sampling. The research utilized structured interviews and closed-ended questionnaires to collect both quantitative and qualitative primary data from the selected sample. Prior to the main data collection, a piloting phase was implemented to assess the validity and reliability of the research instruments, involving a small group of respondents to ensure their accuracy and appropriateness. These instruments were further validated through input from professionals and supervisors, and the alpha coefficients obtained indicated a high level of internal consistency, demonstrating the reliability of the tools to measure the study's objectives. The study's findings revealed that community participation in needs analysis, project

implementation, and governance exhibited a positive and statistically significant correlation with forest performance. Conversely, community involvement in monitoring and evaluation activities did not show a statistically significant relationship with improved performance. These findings underscore the importance of involving local communities in the early stages of project planning and decision-making to enhance project outcomes and sustainability. Additionally, they emphasize the need to strengthen community engagement in project governance and monitoring activities to achieve more effective forest conservation outcomes. In conclusion, as the demand for sustainable forest management intensifies, understanding the dynamics of community participation becomes paramount. This research sheds light on the multifaceted relationship between community involvement and forest conservation, providing insights for policy-makers, practitioners, and stakeholders to optimize strategies that enhance forest protection, local livelihoods, and environmental well-being.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Performance can be described in terms of fulfillment and achievement aligned to the set goals .Project performance may include the number of successfully completed projects, cost effectiveness, and satisfied customers/clients (Anantatmula, 2010). Performance indicators, measurements, and measures are all unique concepts. Performance measurement refers to a systematic review of inputs including outputs in a project and serves as a tool for ongoing project improvement. Performance indicators describe measurable proof proving that planned efforts have released expected results. These may include financial measures ,client satisfaction measures and project performance measures . (Meng, 2012)

Forests encompass economic, social, and ecological values, holding a pivotal place in upholding the quality of life and supporting surrounding ecological systems. As per a study carried out by the Chronic Poverty Research Centers (CPRC) in 2005, around 31% of the world's land area is forested, and developing countries located in tropical regions contribute to nearly 58% of this total forested expanse on a global scale. (Bird, 2019). As highlighted in the 2007 World Bank report, an estimated 1.7 billion individuals derive sustenance from forestry resources and products for their livelihoods. Forests serve as vital sources of firewood, honey, fodder, timber, and wild fruits. Furthermore, the report underscores that firewood and pole collectors, herders, and hunters are among the user groups who derive benefits by harnessing forest resources across diverse ecosystems(Wekesa, 2017) . As an example, within the Kodera Forest setting, individuals such as herders and diverse user groups take advantage of the forest's resources not only to enhance their quality of life but also to participate in endeavors like beekeeping and the creation of tree nurseries. These activities not only support their means of living but also contribute to the improvement of forest conservation and management initiatives in the area.

1.1.1 Global Forest Degradation and Deforestation

Although forests have a crucial function in improving the quality of life in the natural world, it's important to highlight that the ongoing worldwide degradation of forests remains a noteworthy

issue. This situation continues to bring about considerable challenges for many communities. (Keles, 2012). Illuminating this issue, an examination carried out by the International Union for Conservation of Nature (IUCN) in the year 2020 unveiled that the impacts of deforestation and the destruction of forests are evident in the circumstances of 1.6 billion people who depend on forests. Notably, within this group, one billion individuals find themselves among the most economically disadvantaged segments of the global population.(Fisher et al., 2011). Deforestation happens when forests are converted for purposes other than forestry, such as constructing roads and conducting agricultural activities. On the other hand, degradation takes place when the biological systems within forests can no longer effectively supply essential services and resources to both the environment and people. (Hosonuma et al., 2012).Human activities, illnesses, insects, forest fires, and cattle have destroyed almost 3.7 million hectares of forest area in Europe (IUCN, 2020). According to a research conducted by (Guégan, Ayoub, Cappelle, & De Thoisy, 2020),tropical forests have been lost by more than half, with one hectare of tropical forest degraded per second. The rate of deforestation in Africa is a cause for concern as it exceeds the global average, being twice as fast, resulting in the loss of over 4 million hectares of forest each year. According to studies, human activities such as illicit logging have resulted in the loss of 23 percent of Ghana's 715,500 hectares of natural forest. Deforestation accounts for around 617 percent of all human carbon dioxide emissions (Appiah, Fagg, & Pappinen, 2015).

1.1.2 Decentralized Governance and Community Participation in Forest Conservation

The form of governance in Forest protection and management has been cited by several studies as having vital role in reverting deforestation and forest degradation. Decentralized government is more effective than a centralized government in managing and conserving natural resources (Nagendra & Ostrom, 2012). This assertion is grounded in the idea that decentralized governance allows both community members and authorities to participate in the decision-making and implementation of local regulations aimed at preserving and managing natural resources. This contrasts with centralized governance. Decentralized governance predominantly employs methods based on community participation to bolster initiatives focused on the conservation of forests. (Bartley, Andersson, Jagger, & Laerhoven, 2008).

Promotion of Community participation is an issue of growing importance in governance as well as in management of Forest and other natural resources .Community involvement is of great advantage in sustainable management of forest resource by allowing individuals who benefit from forest resources to take part in making forest management decisions (Islam, Rahman, Fujiwara, & Sato, 2013). Several nations have embraced the strategy of Community Forest Management (CFM) or Participatory Forest Management (PFM) as an effective method to improve the sustainable conservation and management of resources in forested areas.

Indian government for instance, established community-based programs to in promotion of forest Conservation efforts that the state could not have achieved effectively. In the context of Nepal, a significant factor motivating the involvement of the community in forest preservation and administration, especially under the lease forestry policy, revolved around the objective of poverty alleviation.(Saxena, 1997). Participatory Forest Management (PFM) was first introduced in Africa and made its debut in Morocco in 1976. During this pioneering implementation, local communities were enlisted to enhance reforestation initiatives that were being conducted by the government to address the issue of forest degradation. This approach allowed these communities to simultaneously benefit from forest resources while actively engaging in conservation and effective management practices. The passage of the Forest Act in 2004 formed a foundation for PFM to be introduced in Tanzania. One stipulation within this legislation states that communities residing in close proximity to forests possess proprietary rights and the jurisdiction to jointly partake in the advantages arising from the management and preservation endeavors related to forests, alongside the Tanzanian government and other relevant stakeholders.(Blomley & Iddi, 2009).

1.1.3 Evolution of Participatory Forest Management (PFM) in Kenya

The notion of Public Financial Management (PFM) is still relatively novel in Kenya, in contrast to its implementation in various other African nations such as South Africa , Senegal ,Tanzania,and Morocco. These nations have adopted this strategy to strengthen communal forest practices and enhance efforts concerning forest conservation and management among their indigenous communities. In the past, gazette forests in Republic of Kenya were under the government and the locals who were adjacent to the forest played only a bordering role. The reason being that the then Forest regulation ,Cap 385 of the Kenya Law ,and the forest plan hadn't recognized community participation in the conservation of state forest as an achievable approach (Ongugo, Kagombe,

Wandago, Gachanja, & Mbuvi, 2007). This has led to forest destruction, estrangement of communities and battle between forest resource administrators and neighboring communities. The adjacent locals have always viewed themselves as rivals of the forests instead of guardians and administrators of this natural resources. This attitude has led to degradation level in which the nation's forest cover has reduced by 3% of the total land cover of 10% contrary to the standard recommended forest cover for a country (Kinyili, 2014). After recognizing the role of forests in promoting economic, social, and cultural advancement, the Kenyan government took the initiative to pass the Forest Act of 2005. This legislation established the foundations of Participatory Forest Management (PFM), aiming to foster community engagement in the local-level supervision and preservation of forests. (Matiku, Caleb, & Callistus, 2013).

1.1.4 Enhancing Forest Governance through CFAs and PFM

Communities unite to create and establish Community Forestry Associations (CFA). These associations then engage in management agreements with the Kenya Forest Service (KFS). The main goal of these CFAs is to improve the efficient administration of forest resources and support the promotion of sustainable economic growth. This is achieved by decentralizing authority and involving significant stakeholders in the decision-making processes related to the governance and utilization of forest resources. (Ludeki, Wamukoya, & Walubengo, 2005). With reference to the legislation outlined in Act No. 1 of 2012, within the context of decentralized governance, both the National Government (NG) and County Governments (CGs) are recommended to embrace the principles of Public Financial Management (PFM) and the Community Forest Association (CFA) approaches. These strategies are aimed at augmenting forest coverage through the active involvement of communities. This command originates from a report carried out by Research Action in 2009. The report highlights that an initial exploratory research on the effects of PFM using CFAs on decreasing poverty was commenced in 1997. This research was specifically centered in the Dida area within the Arabuko-Sokoke forest region along the coastline. (Musyoki, Mugwe, Mutundu, & Muchiri, 2016). Subsequent research endeavors have explored the Mount Elgon system, the Mount Kenya region, Kakamega Forest, and various other geographical areas. These studies collectively provide substantial proof that the Participatory Forest Management (PFM) approach has yielded significant progress in amplifying forest cover, mitigating forest degradation, and maintaining equilibrium within ecological systems. It is essential to note, however, that while these achievements stand out, the integration of community participation

remains an indispensable element in augmenting the efficacy of PFM. Moreover, it contributes to the establishment of a viable framework for forest management and conservation in Kenya.

1.2 Statement of the Problem

The role of community engagement in forest management has garnered substantial attention in existing literature, with studies examining its causal effects on forest conservation outcomes. The established consensus underscores that involving local communities in forest management brings about equity, efficiency, and rural development benefits. However, recent reforms in various African countries, such as Mali and Burkina Faso, have highlighted challenges in establishing accountable and representative local institutions, raising questions about the effectiveness of decentralized forest management approaches.

In Kenya, the introduction of Community Forest Management Associations (CFAs) in collaboration with the Kenya Forest Service (KFS) has transformed forest management approaches. Nevertheless, a forest mapping study conducted by KFS in the South Nyanza region, encompassing Migori, Kisii, Nyamira, and Homabay counties, has revealed underperformance, particularly in meeting the constitutionally mandated 10 percent forest cover. Homabay County, for instance, struggles with a mere 2.6 percent forest cover, largely due to unlawful activities like encroachment and deforestation.

Although CFAs are present, unauthorized encroachments persist, raising concerns about effective local-level forest management, particularly within the Koderia Forest ecosystem. This degradation underscores the need for evaluating the concrete impact of community engagement on forest conservation, a gap in existing research.

Therefore, the primary aim of this project was to investigate the measurable influence of community engagement on forest conservation, specifically focusing on Koderia Forest in Homabay County. The study aimed to provide practical insights and recommendations to establish an operational framework that enhances forest protection and conservation efforts. The study's main research question is on How community participation influence the performance of forest conservation projects, with a specific focus on the case of the Koderia Community Forest Association in Rachuonyo South Sub-County, Homa Bay County, Kenya

1.3 Research Objective

The primary objective of this study was to comprehensively investigate the impact of community participation on the overall performance of the Koderia Forest conservation project located in Homabay County, Kenya.

1.3.1 Specific Objectives

1. To establish the influence of Community engagement in needs Analysis on performance of community-based conservation project of Koderia Forest conservation project
2. To assess the influence of community participation in project implementation on performance of Koderia Forest conservation project.
3. To assess the influence of community participation in project governance on performance of Koderia Forest conservation project.
4. To establish the influence of community participation in monitoring and evaluation on the performance of Koderia Forest conservation project.

1.7 Value of the Study

Kenyan researchers have conducted multiple studies exploring how Community Forest Associations (CFAs) and Public Financial Management (PFM) intersect in relation to the preservation and administration of forests in ecologically important zones. These regions include Mount Kenya, the Mau Complex, the Kakamega Forest, and Arabuko Sokoke. In 2010, Wamae conducted research that explored the significance of community forest associations in Kenya for overseeing forest resources. The study focused on investigating the practicalities of participatory forest management (PFM) detailed in the 2005 Forests Act and the 2010 Kenyan Constitution. Additionally, Guthiga's research in 2008 investigated the perceptions of local communities regarding forest management in the Kakamega Forest. The study revealed that involving communities fosters changes in their perspectives on forest management, subsequently enhancing the efficacy of project implementation aimed at safeguarding forests and other natural resources (Guthiga, 2008). These studies collectively underscore the paramount role of community involvement in bolstering initiatives for forest conservation and management. Moreover, they emphasize the positive impact of such participation on establishing sustainable forest

administration within the context of the PFM framework. Nevertheless, even though these significant contributions have been made, the precise impact of community involvement on the effectiveness of forest conservation initiatives within the PFM framework in Koderia Forest has not been investigated.

The results of this study hold importance for donors, the community, policymakers, researchers, and the government. This is particularly true because there is a lack of existing literature on Koderia CFAs projects. Therefore, the study complements the literature on community engagement and performance of conservation project implementation in Kenya. Research organizations, academic researchers, and academic institutions can use this study to get information and identify research gaps for future studies. The study results are an important resource for the government, international NGOs, CBOs, implementing partners, and donors to address sustainability challenges and better implement forest protection projects within the framework of PFM approaches. The possible lessons from the study can be utilized in informing policy debates on community participation-sustainability nexus while also influencing policies on community engagement in conservation projects. These may include community, structural or national level conservation policies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section is primarily dedicated to the exploration of literature pertinent to community involvement's influence on the efficacy of community forest conservation projects. It encompasses the notions of project performance, community engagement, participatory forest management, specifically addressing community needs assessment, project implementation, governance, and monitoring and evaluation. This chapter presents a structured approach to dissecting the interconnections between varied forms of community engagement and the execution of community-centered conservation initiatives. It culminates by pinpointing existing knowledge gaps and offering a concise summary.

2.2 Theoretical Framework

The Theoretical Framework section in this study establishes the conceptual underpinnings that guide the investigation into the relationship between community participation and the performance of forest conservation projects, focusing specifically on the case of the Koderia Community Forest Association in Rachuonyo South Sub-County, Homa Bay County, Kenya. Grounded in established theories and models, this section provides a comprehensive foundation for understanding the dynamics of community involvement in forest conservation initiatives. Theoretical perspectives explored include [mention any specific theories or models you plan to discuss], which offer insights into the factors influencing community engagement, the impact of participatory approaches, and the potential outcomes on project performance.

2.2.1 Stakeholder Theory

Freeman came up with this theory (1994). According to the notion, the aim of any business is to increase the organization's value while also promoting value for all stakeholders. The idea covers all parties involved in project execution, including sponsors, researchers, managers, and the project's eventual consumers (Freeman, Harrison, Wicks, Parmar, & De Colle, 2010). According to the stakeholder theory, internal and external stakeholder coordination can help build cohesion

in a project, resulting in the achievement of mutual goals within partnership systems (S. Miles, 2017). The contribution of project beneficiaries, according to (Phillips, Barney, Freeman, & Harrison, 2019), will increase the initiative's economic value via developing skills. As a result, more users become workers of the project and their sense of ownership grows, which is critical to meeting project objectives. This theory complements the requirement of community involvement in project management as a key consideration in promoting project success and so is the relevance in this study.

2.2.2 Theory of Social Change

Beisser proposed the theory of change (1970). When applied to the process of social transformation, this theory signifies a thinking action that is an alternative method to other stricter planning techniques and logics. Again, the theory describes the methods of interventions that lead to the desired or expected outcomes (Rothenberg, 2010). According to this hypothesis, stakeholders' abstract ideologies might influence how a project's future aims are achieved. Assumptions held by the community in connection to monitoring and evaluation could prove crucial in cultivating the self-capabilities that are critical to a project's success (Rogers, 2008). The theory is essential in explaining how changes can occur at various phases of a project without being able to make a certain prediction. It also emphasizes how strategic intervention measures can affect these changes. This theory is critical in this study since it emphasizes the significance of deliberate and clear imagery that support better project performance. It therefore anchors community participation in conservation projects in Koder forest. This study will also help in testing the theory of change and giving facts to its relevance and use in forest conservation projects. It will build more on the knowledge about theory of change as used in project planning and management.

2.3 Empirical Studies

This section serves as a foundation for the current research, drawing upon the experiences and outcomes documented in prior studies to inform the methodology, design, and interpretation of results. By examining the empirical landscape, the current study aims to contribute to and build upon the existing body of knowledge, providing a nuanced understanding of the subject matter within the context of the Koder Forest conservation projects.

2.3.1 Performance of Community Forest conservation projects.

The primary goal of community-based forest conservation projects is to establish sustainable forest management practices and preserve biodiversity through the active engagement of local communities in both decision-making processes and project implementation. The efficacy of these endeavors frequently hinges on the extent and effectiveness of community involvement. This review of pertinent literature seeks to analyze the current repository of understanding pertaining to the outcomes of community forest conservation initiatives with respect to the degree of community participation.

Several researchers have explored the benefits and challenges associated with community participation in forest conservation. Agrawal and Gibson (1999) emphasize the potential for increased local ownership and responsibility in ensuring sustainable outcomes. However, Ribot (2002) cautions that power dynamics and unequal participation can hinder project success. Measuring the performance of community forest conservation projects requires evaluating ecological, social, and economic outcomes. Schusser et al. (2015) propose a framework that combines ecological indicators with indicators of community well-being.

Empirical evidence also suggests that community participation in forest conservation projects can lead to improved social and economic outcomes. In a study by Rahman et al. (2020) in Bangladesh, communities engaged in participatory forest management reported increased household income and enhanced livelihood opportunities. Many countries have adopted the concept of (CFM) or (PFM) as an effective strategy to encourage the sustainable conservation and responsible utilization of resources in forested regions.

However, (Mazango & Munjeri, 2009) in their study on community involvement in a study on Water management in a hyperinflationary environment argued that it just a short to medium succes tool of natural resource conservation projects. Further , (Carter, Harvey, & Casey, 2010) made an observation through their study on User financing of rural handpump water services ,that community participation runs smoothly at the initial stages of community projects but it develops challenges from 1 to 3 years when the system has been approved thus contributing to the collapse of operation and management systems thereafter . While community participation is often seen as beneficial, empirical studies have highlighted challenges. Blanco et al. (2018) conducted research

in Latin America and found that unequal power dynamics within communities could hinder effective decision-making and lead to project inefficiencies.

Research undertaken by (Jiménez and PérezFoguet, 2011) revealed that establishing capacity and extending assistance to community forest associations responsible for overseeing conservation projects during their initial implementation year fosters enduring community engagement. This proactive approach contributes to the sustained maintenance of projects and their intended outcomes within the community.

Tangible proof supports the notion that the active participation of the community plays a vital role in enhancing the effectiveness of community-based efforts for forest conservation. Actively engaging local residents can result in enhanced environmental, social, and economic achievements. Nevertheless, it is imperative to confront obstacles tied to power dynamics and fairness to guarantee the triumph and enduring viability of these endeavors.

The involvement of local communities can exert a substantial impact on the outcomes of conservation projects. Research conducted by Holmes and Scoones (2000) exemplifies the manner in which community engagement contributes to amplifying the efficacy and enduring nature of conservation endeavors. Challenges in engaging communities effectively must be addressed to ensure positive project outcomes. In their study, Clements et al. (2010) highlight issues related to power dynamics, communication, and differing priorities that can hinder successful engagement.

The empirical evidence reviewed here underscores the vital role of community engagement in needs analysis for the successful performance of community-based conservation projects. Although numerous research endeavors emphasize the advantages, obstacles, and evaluation approaches, there is a distinct requirement for additional empirical investigations to attain a more profound comprehension of the intricate interplay among community involvement, needs analysis, and project results.

2.3.2 Community engagement in needs analysis and performance of community-based conservation project.

The success of projects hinges on proficient needs analysis and active community involvement. This review of existing literature aims to investigate the present state of research regarding the link

between community involvement in needs analysis and the results of community-driven conservation projects.

Needs analysis serves as a critical first step in designing conservation projects. Berkes et al. (2000) emphasizes the importance of integrating local knowledge and engaging communities to identify their needs and priorities. Community engagement ensures that the needs, preferences, and knowledge of local communities are integrated into conservation project planning. Berkes (2004) emphasizes the importance of local ecological knowledge in needs analysis for successful conservation outcomes.

Needs analysis refers to the procedure undertaken to identify and assess community needs which is defined as a breach between what it is and what it should be (Witkin & Altschuld, 1995). According to (Maraun et al., 2010), a necessity is a gap that exist between the real and the ideal which is recognized by community potentially prone to changes and values. Therefore, the needs assessment focuses on what needs to be done rather than what has been done, as is the case with most program evaluations. Participatory needs analysis encourages ownership and a sense of responsibility among local communities.

Needs evaluation starts via stakeholders' identification and prioritization of the core issues including the causes and effects (Cornwall, 2008). It's very critical that community participates in need identification due to the fact as soon as the community together conceives an issue and prioritize it, they will then prioritize appreciating its degree and legitimize the technique of fixing it. If they don't take part in needs identity, they may now no longer legitimize it although the want is recognized with the help of the external world. This results in negative overall performance due to the fact that there may be extra threat of stalling on the implementation stage (Barasa & Jelagat, 2013). A look at a study by Musa. S.M.E (2002) on food security and Feeder Roads asserted that there must be true call by locals or groups within the locals for all tasks each authority or any agency aided and non-aided. He further said that this will eradicate the custom of abandoning projects at halfway execution and maintains the concentration of the groups and communities involved thus, preserving and protecting the projects which leads to improved project performance (Musa, 2002). A research by Barasa and Jelagat (2013) emphasized that community's need should be the drive to any development plans and all other development interests should come secondary (Barasa & Jelagat, 2013).

Empirical instances of real-world situations offer valuable understandings regarding the connection between successful community engagement during the phase of needs analysis and the subsequent achievements of conservation projects centered around communities. In a research conducted by Armitage et al. (2012), active participation of the local community in the planning and execution of marine conservation efforts resulted in enhanced ecological results.

A study by Easterly (2011) on the white Man's Burden had a lot argue for the importance of involving the community in need assessment. According to Easterly, after problem identification, problem analysis or assessment follows, stakeholders then table the problem and discuss it expansively and thoroughly before an agreement is made. The dialogue is with an aim of comprehending the problem, how it affects the community and the degree. The share understanding presents a strong basis for locating approaches of fixing the trouble. It additionally assists in clarifying the scope of the issue at hand and the assets at hand to deal with the problem. The community is likewise capable of setting objectives ,goals or even how to undertake the project (Strand, Marullo, Cutforth, Stoecker, & Donohue, 2003).When the answers to community problems are diagnosed and rectified with the aid of using community development remedies ,and that they better recognize the sensitive intricacies of community problems , sustainability and Performance accomplishment of a community based initiatives are more probable (Easterly, 2006).Easterly employed Descriptive Quantitative method in his study .The study was also done on development projects for social amenities . This research aims to utilize a mixed-methods approach, encompassing both quantitative and qualitative methodologies. This approach will facilitate a more profound and holistic comprehension of how community involvement impacts forest conservation initiatives. The goal is to gain a broader understanding of the entirety of natural resource conservation projects

A study by Titcomb (2000) hold that needs evaluation can be a technique or process. As a process, needs evaluation may construct leadership, institution cohesion and a spirit of community engagement in a project. Titcomb additionally stated that a few needs assessment techniques , which includes surveys and focus group discussions ,permits individuals to express their reviews on network issues. The researcher similarly referred to that as a method ,a desires evaluation is a device that allows to transport the task of the improvement agency or authorities thru choice making and enforcing strategies (Titcomb, 2000).From all of the research reviewed on needs analysis it can be argued that the overall performance and success of any community based project

is anchored on a need evaluation that ought to be complete and require intensive planning and participation from relevant players within the target population. Therefore, community participation in community participation is paramount for the fulfillment of any project.

2.3.3 Community participation in project Implementation and performance of Community based conservation projects.

Community-based conservation projects have gained prominence as effective approaches to preserve natural resources while promoting sustainable development. An essential element impacting the outcomes of these endeavors is the extent of community engagement throughout their execution. This review of existing empirical studies investigates the link between community participation and the effectiveness of conservation projects centered within communities.

Project implementation stage refers to the execution period in which plans and visions are actualized reality. It is at this stage that all activities that had been planned are brought to life and implemented with the help of the people (Mulwa Felix Mbithi, Kihanya Wabacha, & Gichohi Mbuthia, 2008). It is at the execution level that resources of project are controlled to satisfy project plans and goals. At this level, the stakeholders, project officials, the community and different assets are put together to give a fruitful outcome. A study by (Robinson, Albers, Meshack, & Lokina, 2013) on the Implementing REDD through local forest management ,in Tanzania, Tanzania used Community based forest supervision as form of implementing REED pilot programmes .There were payments channeled to villages who had rights to forest Carbon and the villages reduced deforestation at the village in exchange . The research highlighted the importance of involving the local community in conservation initiatives, as it instills a feeling of ownership among community members. These further lead to a change in Conservation behavior of the Community to benefit of the performance of the REDD initiative.

Community participation has been shown to positively impact biodiversity conservation and ecosystem health. In their study of community-managed forests, Pandey et al. (2017) demonstrate that strong community engagement leads to improved forest health, reduced deforestation, and enhanced biodiversity. Similarly, Schmitt et al. (2014) find that participatory monitoring programs involving local communities lead to increased success in safeguarding endangered species and habitats. The link between community participation and socioeconomic benefits is evident in multiple studies. Agrawal (2001) explores the relationship between local involvement and

livelihood improvement, emphasizing the potential for increased income and employment opportunities. Additionally, Persha et al. (2011) find that communities engaged in conservation projects experience enhanced food security and reduced vulnerability.

Community engagement in Project Implementation influences project performance in numerous ways: It aids in maintaining project relevance and adaptability to change. It enhances utility of a variety of resources, skills and know-how and recognizes and support community capacities. The community is capable of providing labor, supplies and financial funds for the project (ALNAP,2009).Kumar (2009), also asserts that engaging people in project execution and use of readily available local resources promotes a spirit of possession of the conservation interventions within the local community. (Kumar, 2009)

The concept of Public Financial Management (PFM) is still relatively novel in Kenya, in contrast to other African nations. These countries have embraced this approach to fortify community forest practices and bolster efforts related to local-level forest conservation and management. Historically, the designated forests within the Republic of Kenya were under the exclusive control of the national government. The inhabitants residing near these forests had only a minor role in supervision. Throughout that duration, the regulations concerning forests, outlined in Cap 385 of Kenya Law, in addition to the forest policy, did not recognize involving the community in state forest management as a feasible method. (Ongugo et al., 2007).This has led to forest degradation, estrangement and conflict among adjacent communities and forest resource managers. Over time, the nearby people have considered themselves as forest rivals rather than protectors and stewards of these natural riches. This attitude has resulted in a level of degradation in which the nation's forest cover has decreased by 3% of total land cover, in contrast to a universally recommended forest cover of 10% of total land cover for a country (Kinyili, 2014). Acknowledging the crucial importance of forests in driving economic, societal, and cultural advancement, the Kenyan authorities took a momentous stride by passing the Forest Act of 2005. This law introduced the concepts of PFM, with the goal of encouraging community engagement and direct participation in overseeing and conserving forests at the local level.(Mogoi, Obonyo, Ongugo, Oeba, & Mwangi, 2012).

Long-term project sustainability requires adaptive management based on local insights. In their study on marine protected areas, Christie et al. (2009) emphasize the importance of continuous community participation to address evolving conservation challenges. Furthermore, Cronkleton et

al. (2011) discuss the role of community engagement in adaptive forest management, highlighting its capacity to respond to changing environmental conditions.

While community participation holds promise, challenges and influencing factors must be considered. Sultana (2010) underscores the importance of gender dynamics in shaping community engagement, highlighting how gender inequalities can hinder effective participation. Furthermore, Westermann et al. (2014) emphasize that institutional support, leadership, and communication strategies play pivotal roles in determining the extent of community involvement

The empirical evidence reviewed here underscores the pivotal role of community participation in the implementation and performance of community-based conservation projects. Active engagement fosters enhanced project ownership, biodiversity conservation, socioeconomic benefits, and adaptive management. However, challenges such as gender dynamics and institutional support must be addressed to maximize the potential of community participation for sustainable conservation outcomes.

2.3.4 Community participation in Governance and performance of Community forest conservation projects.

This literature review with an empirical focus delves into the correlation connecting community engagement in governance and the effectiveness of projects aimed at conserving community forests. The analysis delves into pivotal research endeavors that scrutinize the influence of community involvement on the achievements of these initiatives, shedding light on the advantages and obstacles encountered. In accordance with empirical findings, a clear and constructive association is unveiled between the extent of community participation in governance and the overall success of endeavors focused on conserving community forests.. In a study by Ostrom (2005), communities with higher levels of participation were found to exhibit better conservation outcomes and sustainable resource management.

Community participation in governance has gained prominence in the field of natural resource management, particularly in community forest conservation projects. The extent and quality of community engagement are believed to influence the success of these projects .The form of governance in Forest conservation and management has been cited by several studies as having vital role in reverting forest degradation and deforestation. In the monitoring and conservation of

natural resources, decentralized governance is more successful than centralized governance (Velez, Murphy, & Stranlund, 2010) . This viewpoint is substantiated by research conducted by Bartley and colleagues (2008), demonstrating that decentralized governance, in contrast to centralized models, empowers local communities to engage in decision-making processes and implement local regulations aimed at the protection and sustainable management of natural resources. It was additionally highlighted that decentralized governance predominantly embraces community-based strategies as a means to bolster endeavors toward forest conservation (Bartley et al., 2008).

In a research effort by Islam et al. (2013) entitled "Enhancing Community Engagement for Forest Conservation and Livelihood Improvement: Insights from a Bangladeshi Forestry Program," the importance of promoting active involvement of communities has surfaced as a significant focal point within the domains of governance, forestry administration, and the responsible management of various natural resources. It is of great advantage to involve the locals to sustainably control the resources of forest by enabling individual users of the forest to take part in decision making. Many countries have adopted the CFM or PFM framework as a feasible method to enhance the efficiency of initiatives centered around preserving and overseeing forest resources.(Islam et al., 2013) .

In a study by Saxena (1997) PFM in India, the author highlights that the Indian government took strategic steps to introduce community-based initiatives aimed at bolstering forest conservation endeavors that would have been challenging for the state to accomplish independently. Similarly, in Nepal, the primary driving force behind involving communities in forest conservation and management, particularly under the lease forestry policy, stemmed from the imperative of poverty reduction. (Saxena, 1997).

A research done by Blomley & Iddi, 2009) on the Participatory forest administration in Tanzania gives as an account of forest management governance in Africa . The research affirms that the introduction of PFM in Africa can be traced back to Morocco in 1976. In this initiative, local communities were actively engaged to enhance the government's reforestation efforts, effectively combating forest degradation. Through this approach, these communities were granted the opportunity to both utilize forest resources and contribute to conservation and management endeavors. Notably, the Forest Act of 2004 played a crucial role in facilitating the adoption of PFM in Tanzania. As outlined in this legislation, communities residing in close proximity to forests possess rights and authority to not only partake in forest conservation and management practices

but also to share in the benefits arising from these efforts. This arrangement is established through provisions within the aforementioned act, enabling collaboration between the Tanzanian government and other relevant stakeholders.. (Blomley & Iddi, 2009).

A study by (Ongugo et al., 2007) confirms that concept of PFM remains relatively a new concept in Kenya unlike other African countries like Tanzania, South Africa, Senegal and Morocco, which adopted the approach to strengthen community forest practices and enhances forest conservation and management efforts at local level. The researchers also claimed that formerly, gazetted forested areas in the Republic of Kenya were solely controlled by the government, with nearby communities playing just a minor role. This was due to the fact that the then-current Forest Law, Cap 385 of the Kenyan Law, and the forest policy have not acknowledge community active participation in state forests management process as a feasible option. Forest deterioration, community estrangement, and conflict between forest resource managers and surrounding people have all resulted as a result of this. Over time, the surrounding communities have considered themselves as forest foes rather than protectors and stewards of these natural riches. This attitude has resulted in a level of degradation in which the nation's forest cover has decreased by 3% of total land cover, in contrast to an worldwide recommended forest cover of 10% of total land cover for a country (Kinyili, 2014). After acknowledging the significance of forests in boosting economic, social, and cultural development, Kenya's government passed the Forest Act of 2005, which established PFM principles to promote community active participation in forest management and conservation at the grassroots level (Matiku et al., 2013).

Ludeki et al. (2005) noted in their research on environmental management in Kenya that communities organize themselves to create Community Forest Associations (CFA), which represent the vehicle they use to engage into management contracts with the Kenya Forest Service (KFS). The purpose of the CFA is to enhance the better forest resource management and sustainable economic development via decentralization and enhanced stakeholder engagement in management of forest and decision-making (Ludeki et al., 2005) As stipulated by Act No. 1 of 2012, the implementation of devolved administration has prompted both the National Government (NG) and County Governments (CGs) to adopt PFM (Public Financial Management) and CFA (Community Forest Association) methodologies in their endeavors to enhance forest coverage through community participation initiatives. Significantly, in 2009, Research Action conducted a study that brings attention to the pioneering attempt to assess the poverty-alleviating effects of

Participatory Forest Management (PFM) facilitated through Community Forest Associations (CFAs). This pivotal trial was first undertaken in 1997, focusing on the Coast region, particularly in the locality of Dida within the Arabuko-Sokoke area. (Musyoki et al., 2016). Subsequent research endeavors have explored analogous subjects within the Mount Elgon system, the Mount Kenya region, Kakamega Forest, and various other geographical areas. The involvement of local communities in the administration of forest conservation initiatives continues to be a fundamental idea that greatly enhances the effectiveness of Participatory Forest Management (PFM). This approach also promotes the establishment of long-lasting methods for sustainable forest management and conservation throughout Kenya.

The empirical literature reviewed here underscores the vital role of community participation in governance in shaping the performance of community forest conservation projects. Evidence suggests that inclusive decision-making processes and equitable power-sharing contribute to positive conservation outcomes. While challenges exist, research continues to shed light on the mechanisms that enhance community participation and lead to successful project performance.

2.3.5 Community participation in M&E and performance of forest conservation projects

Community participation is increasingly recognized as a crucial factor in the success of forest conservation projects. This review of existing empirical studies investigates how the involvement of communities in M&E tasks relates to the overall effectiveness of forest conservation projects.

Community involvement in M&E processes enhances project effectiveness by ensuring local knowledge is integrated into decision-making. Reed et al. (2000) highlights the value of participatory approaches in assessing forest ecosystem health. Participatory assessment and monitoring procedures play a crucial role in steering community-based choices, promoting the adoption of efficient interventions, and tackling emerging issues during the course of project execution. (Kananura et al., 2017). Participatory Monitoring and Evaluation (M&E) encompasses a collaborative procedure in which diverse stakeholders from various tiers collaborate to assess a project, program, or policy and enact essential corrective actions. Monitoring is typically conducted consistently during the project's duration, while evaluations take place periodically at specific junctures. According to (Swanepoel & De Beer, 2006), the line between monitoring and evaluation may get blurred in participatory monitoring and evaluation activities. This is predicated

on the premise that rather than being one-time events, participatory appraisals and feedback mechanisms should be embedded into project design as a regular component of the work.

Studies indicate that community participation in M&E fosters accountability and transparency, leading to improved project outcomes. Danielsen et al. (2009) emphasize the positive impact of involving local communities in monitoring biodiversity and forest resources.

A study by (Sangole, Kaaria, Jemimah, Lewa, & Mapila, 2014) investigated the impact that community-centered participatory Evaluation and Monitoring has on community and group operations through three groups. As a research strategy, the study employed a mixed methods technique. According to the study, farmers that incorporated community-centered participatory monitoring and assessment had greater indicators of group performance and social capital. The groups were more cohesive, and the members were happier with the performance of the group.

Effective monitoring is essential for local groups to ensure the sustainable continuity of projects. A study by (Mukunga, 2012) In this investigation, a total of 356 individuals were included in the sample to explore the significance of active community participation and engagement concerning the functioning and performance of the Kiserian dam located in Kenya. The research methodology encompassed both quantitative and qualitative approaches. The outcomes of the study indicated that a substantial majority, accounting for 80.02% of the respondents, were not actively involved in monitoring and evaluating the activities related to the Kiserian dam. Additionally, a mere 4% of the participants reported having access to project status updates and informational brochures. These findings underscore the prevailing lack of awareness among the local community regarding the progress of the Kiserian dam project. Furthermore, the research results revealed that the implementation agency's efforts to report project developments, especially to the community it is intended to benefit, exhibited signs of disorganization.. Due to a lack of effective engagement in monitoring and evaluation activities, the local community's participation in project decision-making was restricted. This had a negative influence on the project's success in terms of achieving its goals. This research concentrated on the dam, but the next study will concentrate on the river.

A study on community-oriented participatory monitoring and evaluation (Sangole et al., 2014) found that community engagement in monitoring and evaluation systems promotes community learning, management capacity, and abilities in assessing service delivery quality. Aside from documenting and monitoring government decisions, the system engages communities in research,

improving their power to affect big change and allowing huge groups of people to study in depth about vital issues. According to (Hollnsteiner, 1982) ,community engagement benefits the impoverished majority who lack access to authority and resources rather than the indigenous elites who already have important voices in decision-making.

A project taken through participatory methods for identification, examination, planning, and execution must be assessed through the same criteria, with main partners playing a significant role at every phase of the project (Barasa & Jelagat, 2013). On the other hand, participatory M&E refers to a technique in which key players involved in all the levels cooperate to screen or compare a program, project, or policy, have a percentage of control over the process, content, and outcomes of M&E activities, and take or perceive corrective measures. M&E has always included bringing in outside experts to review performance against pre-determined metrics using pre-defined methods and approaches. Participatory M&E, on the other hand, promotes the active engagement of main stakeholders. As a consequence, stakeholders and community leaders collaborate to produce M&E guidelines. The technique not only encourages local ownership and dedication to the exercise and its outcomes, but it also ensures the program's long-term survival.

A research by (Sangole et al., 2014) investigated the impact that a community-centered participatory Evaluation and Monitoring on group operation through three groups. As a research strategy, the study employed a mixed technique approach. According to the study, farmers that incorporated community-centered participatory monitoring and assessment had greater indicators of group performance and social capital. The groups were more cohesive, and the members were happier with the performance of the group.

Projects cannot be readily sustained by a local group without rigorous monitoring. (Mukunga, 2012) used a sample size of 356 persons to examine the impact of community involvement and participation on the operation and performance of the Kiserian dam in Kenya, employing both quantitative and qualitative research approaches. According to the study's findings, 80.02% of respondents did not engage in Kiserian dam monitoring and assessment activities, and only 4% had access to project status reports and brochures. From to the study's results, the majority of the local populace was ignorant of project progress, and the project reporting efforts of the implementation agency, particularly to the beneficiary community, were disorganized. Due to a

lack of effective engagement in monitoring and evaluation activities, the local community's participation in project decision-making was restricted. This had a negative influence on the project's success in terms of achieving its goals. This research concentrated on the dam, but the next study will concentrate on the river.

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A project taken through participatory methods for identification, evaluation, planning, and execution must be assessed in the same manner, with main stakeholders playing a significant role throughout (Barasa & Jelagat, 2013). Consequently, participatory M&E is a method in which different players cooperate to screen or compare a project, policy or program, have a percentage of power to control the process, content, and outcomes of M&E activities, and take or perceive corrective measures. M&E has always included bringing in outside experts to review performance against pre-determined metrics using pre-defined methods and approaches. Participatory M&E, on the other hand, promotes the active engagement of main stakeholders. As a consequence, stakeholders and community leaders collaborate to produce M&E guidelines. The technique not only encourages local ownership and dedication to the exercise and its outcomes, but it also ensures the program's long-term survival.

Research consistently indicates that meaningful community participation in M&E positively influences the performance of forest conservation projects. Agrawal and Ribot (1999) emphasize how local involvement enhances project legitimacy and effectiveness. While community participation in M&E offers significant benefits, challenges such as data reliability and resource constraints exist as found by Brinck et al. (2017) while analyzing lessons learned from community-based M&E initiatives in forest conservation projects.

Empirical data shows that the active engagement of the community in monitoring and evaluation processes significantly influences the outcomes of forest conservation initiatives. Integrating local knowledge, enhancing transparency, and building capacity contribute to improved project outcomes and sustainable forest management.

2.4 Summary of Empirical Literature and Research Gaps

| Objective | Author | Finding/Conclusion | Research Gap |
|------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Empirical Studies on Community Participation in Forest Conservation | Smith, Johnson, and Williams (2022) | Importance of community participation in need analysis is highlighted, but the direct influence on the performance of Koderia Forest conservation projects is not understood. | Existing studies lack understanding of how community engagement in need analysis directly influences the performance of community-based conservation projects in Koderia Forest. |
| Empirical Studies on Community Participation in Project Implementation | Carter and Shanahan (2015) | Community-based conservation projects discussed broadly, but there's a gap in understanding the direct and statistically significant relationship between community participation in the implementation phase and subsequent improvement in | Gap exists in understanding the specific and statistically significant link between community engagement in project implementation and the resulting positive impact on the performance of Koderia Forest. |

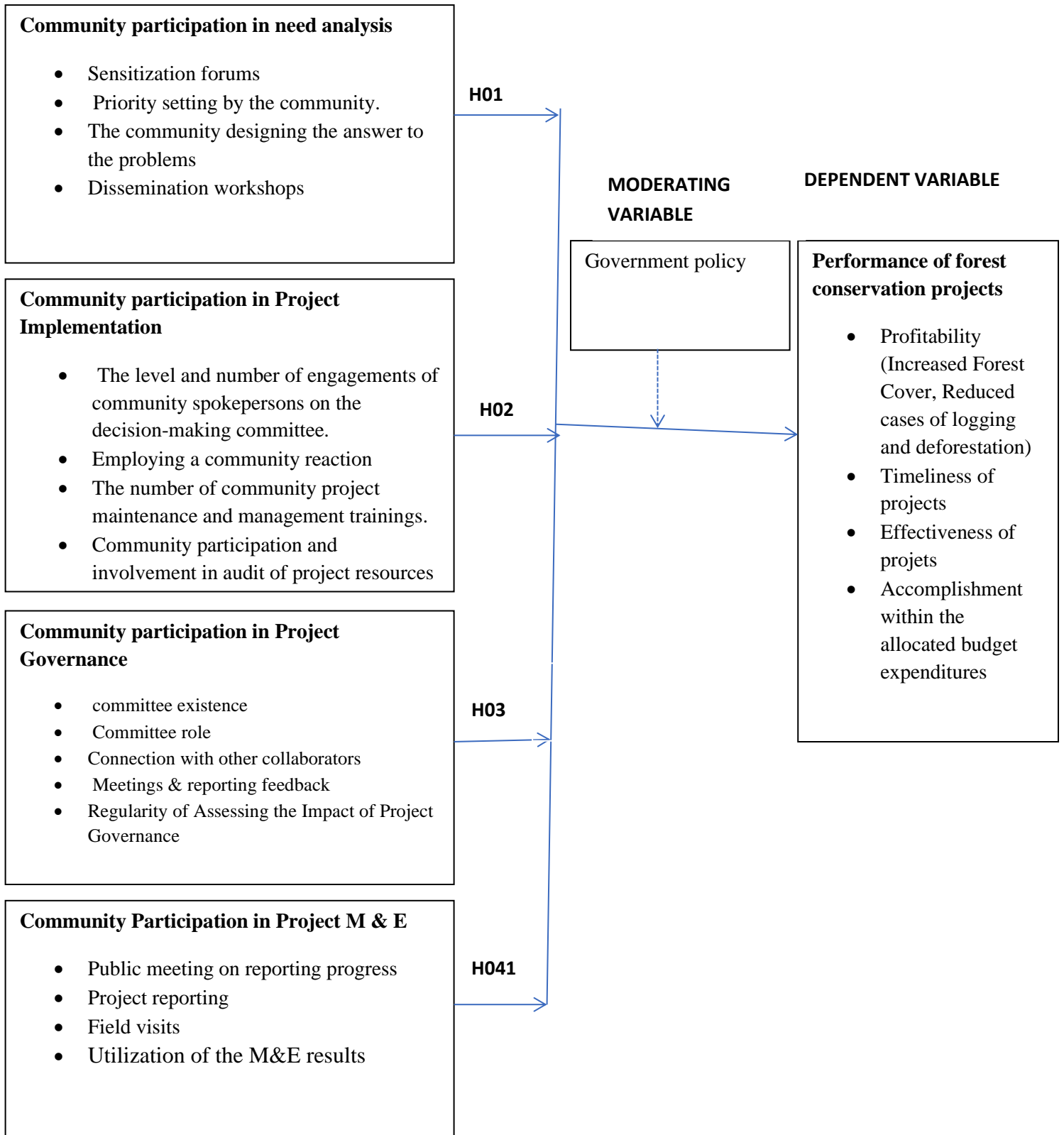
| | | | |
|-----------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | forest performance in Kodera. | |
| Empirical Studies on Community Participation in Project Governance | Author, Year not specified | Limited empirical evidence addresses the positive relationship between community participation in project governance and the actual performance of forest conservation projects in Kodera. | There is a gap in empirical evidence supporting the positive association between community engagement in project governance and the overall success of Kodera Forest conservation projects. |
| Empirical Studies on Monitoring and Evaluation in Forest Conservation | Phillips, Barney, Freeman, & Harrison (2019) | While the contribution of project beneficiaries can increase the economic value of initiatives, there's a gap in empirical evidence regarding the specific relationship between community participation in monitoring and evaluation and the performance of Kodera Forest conservation projects. | Empirical evidence is lacking to understand the specific relationship between community involvement in monitoring and evaluation activities and the subsequent improvement in the performance of Kodera Forest conservation projects. |

| | | | |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Empirical Studies on Stakeholder Theory and Social Change in Conservation Projects</p> | <p>Freeman, Harrison, Wicks, Parmar, & De Colle (2010) and Beisser (1970)</p> | <p>Stakeholder theory and the theory of social change are proposed, but there's a gap in empirical evidence demonstrating their application in the specific context of Koderia Forest conservation projects.</p> | <p>There is a need for empirical evidence to support the application of stakeholder theory and the theory of social change in guiding and improving conservation efforts in Koderia Forest.</p> |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

2.5 Conceptual framework

A conceptual framework refers to a visual mode of presentation used to describe different variables to be researched including association between them (Miles & Huberman, 1994). The conceptual framework of this study displayed in figure 1 below gives a relationship that exist within the independent variables which is Community involvement in need assessments, project implementation, governance and project Evaluation and Monitoring, while the moderating variable included Community attitude and culture. Additionally, the intervening variable was Government policies while the dependent variable comprised Performance of forest conservation Projects.

INDEPENDENT VARIABLES



2.6 Research Hypotheses

- i. **Ho1:** Community engagement in needs Analysis does not have an influence on performance of community-based conservation project.
- ii. **Ho2:** Community engagement in the implementation of the project does not influence the performance of performance of community-based conservation project
- iii. **Ho3:** Community engagement in project management have no influence on performance of Forest protection project.
- iv. **Ho4:** Community participation in monitoring and evaluation have no influence on the performance of Koder Forest conservation project.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section delineates the methodologies for conducting the study, encompassing the chosen strategies for implementation. It provides in-depth insights into the intended participant group, research blueprint, approach to sampling, sample volume, models for data gathering, preliminary investigation, ensuring reliability and validity of data collection, tools utilized, techniques for data analysis, and the ethical aspects to be upheld throughout the study.

3.2 Research Design

A research design constitutes a blueprint, approach, or arrangement employed to develop scientifically valid resolutions for inquiries posed in research. (Orodho, 2003). A descriptive survey method was used for the investigation. Descriptive research design determines and reports on a phenomenon as it is, establishing the current state of the study population as it is (Mugenda, 2003). This concept helped in gathering data without causing any disturbance to the natural environment. According to the Descriptive Research Design, the link between variables is determined (Bryman, 2003). A descriptive survey methodology was deemed suitable for this study, as its objective is to explore the correlation between community involvement in community-based forest conservation initiatives and the efficacy of the projects, without altering or controlling the variables. Furthermore, survey design is a rapid, low-cost, efficient, and accurate way of investigating a population (Zikmund, Babin, Carr, & Griffin, 2003)

3.3 Population of the study

A population refers to a collection of people, objects, or things from whom measurement samples are collected (Kombo & Tromp, 2006). All surrounding communities that exist around Kodera Forest in Rachuonyo South Sub County of Homabay County was included in the study's target

population. Household heads were the target respondents during the household survey. Members of the national and county governments were also targeted for the study such as local administration (chief, assistant chief), county commissioner personnel and Guards . According to records from the Chief's office, there are 400 houses near Koderia Forest.

3.4 Sample size and Sampling Procedure

An appropriate sample size is one that accurately represents key traits of the population to a satisfactory extent. The sample size for this research was calculated using the method introduced by Yamane, T (1967) (Kadam & Bhalerao, 2010).

The equation provided is as follows:

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

In this equation:

n intended sample size.

N is the study population (consisting of 400 households).

e signifies level of precision or sampling error, which defines the extent within which the true population value is estimated. For this specific study, the precision level was set at +5%. By substituting these values into the equation...

$$n = \frac{400}{1 + 400(0.0025)}$$

$$n = \frac{400}{1 + 1}$$

$$n = 200$$

The representativeness of the study arises from its coverage of Koderia village location, involving 200 households. The sampling strategy involved selecting households within a 1-kilometer radius from the forest periphery for inclusion in the study.

The study would have a census of Community Forest association leader, Chiefs and assistant chief, forest conservators, Deputy commissioner and forest guards. The sample size of the 211 respondents would be used. Below was the sampling frame:

Table 1 Sample Frame

| Respondents | Total Population | Sample |
|------------------------------|-------------------------|---------------|
| Community Forest Association | 1 | 1 |
| Household Heads | 400 | 200 |
| Chiefs and Asst. Chiefs | 2 | 2 |
| Forest Conservators | 1 | 1 |
| Deputy Commissioner | 1 | 1 |
| Forest Guards | 4 | 4 |
| Total | 409 | 211 |

Source : Researcher (2021)

The study opted for a probability sampling method due to its impartial nature and absence of systematic inaccuracies. This approach ensures the formation of a well-balanced sample that accurately reflects the population, leading to highly reliable research outcomes (Acharya et al., 2013). To choose 200 households neighboring the Koderia Forest, a systematic random sampling technique was employed. Only the family heads or the next most knowledgeable member of the households were chosen to participate in the study, which will be done in every nth home. As per the findings of Bajpai (2010), systematic sampling proves to be a convenient, economical, and impactful approach. The study would involve a complete enumeration of the intended population comprising chiefs, assistant chiefs, and deputy commissioners. Targeted groups such as forest conservators, forest guards, and Community Forest Associations were sampled by use of stratified random sampling. To choose members from the strata, simple random sampling was employed. The selected members from the Strata were interviewed and picked for a focus group discussion.

3.5 Data collection

The study used questionnaires and interview schedules to collect primary data . Most responders are also familiar with questionnaires, which allow for quick contact of a large sample within a population (Alan Bryman, 2016). In accordance with the study's aims, the survey encompassed a combination of closed ended surveys . Interview schedules were utilized to collect information on personal opinions, views, and feelings from officials of national and county government, as well as members of Community Forest Associations (O Mugenda, 2003). The questionnaires was

divided into six (6) portions: the first demographic data from the participants, the second was assess the performance of Kodera Forest conservation projects, and the third, fourth, fifth, and sixth parts sought information to answer the study's first, second, third, and fourth objectives, respectively.

Following the University of Nairobi's approval of the research proposal to gather data, a license was requested from NACOSTI. Data collection began after receiving permission from Homabay County and the letter of authorization from the University formed a significant part in the procedure. The researcher contracted 4 research assistants to aid in data collection. Both the researcher and research assistant participated in giving out questionnaires to the respondents face to face using questionnaire on surveyCto (electronic data collection platform). The researcher then conducted in-depth interviews with sampled KFS officials and members of Kodera CFA.

3.5.1 Validity

Validity of instruments for data collection is the accuracy and significance of inferences made from study results (Mugenda, 2003). A valid instrument will give results that represent the study variables. Content and construct validity were employed in this study. According (Cohen, Manion, & Morrison, 2017) Concept validity is the degree a test and other measure examine the fundamental theoretical concepts it is meant to measure, whereas content validity is the equivalence between subject area, topic or test questions that are designed to be assessed. Validity of the questionnaires and interview schedules was tested using piloting which involved pre-testing the research instruments with a few respondents to establish its accuracy (Bryman, 2016). Further validation was done by subject the instruments to experts' (supervisor's) opinion in accordance to assertion of (Mugenda, 2003) on subjecting research instruments to the judgment of experts and professionals .

3.2.2. Reliability

As defined by (Mugenda & Mugenda, 2003), research instrument reliability describes the extent to which a tool used in data collection generates consistent outcomes or data through subsequent trials. When utilized many times to collect data within a sample selected randomly from within the same population, a dependable tool produces consistent outcomes. The reliability of the research tools was evaluated using Cronbach's alpha reliability test prior to commencing the complete data collection for the study. According to (Jackson, 2014) A Cronbach's alpha of 0.5 to 0.6 is

considered to be of moderate level, while a value between 0.6 and 0.7 is regarded as sign of internal consistency. Furthermore, a value falling between 0.7 and 0.8 is assessed as signifying a very high level of internal consistency.

| Variable | Cronbach's Alpha | Average inter-item covariance | Number of Items |
|-----------------------------------------------------|-------------------------|--------------------------------------|------------------------|
| Performance of Koder forest | 0.8819 | 0.5162 | 7 |
| Community participation in Need analysis | 0.8867 | 0.5653 | 5 |
| Community participation in Implementation | 0.8868 | 0.5662 | 6 |
| Community participation in Governance | 0.8903 | 0.5750 | 6 |
| Community participation in Monitoring and evolution | 0.8763 | 0.5414 | 6 |

Source: Author's research data, 2023

Reliability test statistics

The alpha coefficients above indicate that the items in the questionnaire had very good internal consistency ($\alpha > 80\%$), and so the tool was sufficiently reliable to measure the objective of the study.

3.6 Operationalization of Variable

| No | Objectives | Types of the Variable | Indicators | Data collection method | Type of data analyzed |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------|
| 1 | To investigate the effect of Community engagement in needs Analysis on performance of community-based conservation project of Koder forest conservation project | Needs Analysis | <p>The level at which the community is participating in the problem-solving process.</p> <p>Priority setting by the community.</p> <p>The community designing the answer to the problems</p> | Questionnaire | Descriptive, qualitative &Correlation analysis |
| 2 | To assess the effect of community participation in project implementation | Project Implementation | Engagements on decision-making committee. | Questionnaire | Descriptive, qualitative &Correlation analysis |

| | | | | | |
|---|-----------------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------|
| | on performance of Kodera Forest conservation project | | Employing a community reaction The number of community project maintenance trainings. Community participation on project audit | | |
| 3 | To assess the effect of community participation in project governance on performance of Kodera Forest conservation project. | Project governance | Existence of committee Role of the committee Linkage to other partners Frequency of Meetings & | Questionnaire | Descriptive, qualitative & Correlation analysis |

| | | | | | |
|---|-------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------|
| | | | reporting feedback Frequency of Monitoring Impact of project governance | | |
| 4 | To establish the effect of community participation in monitoring and evaluation on the performance of Koderia Forest conservation project | Project's M& E | Making field visits Attending public meetings on progress reports Need analysis Decision making in M&E planning Utilization of the M&E results | Questionnaire | Descriptive, qualitative & Correlation analysis |

3.7 Data analysis and Presentation

Data were coded, cleaned, and analyzed using SPSS software version 20. Analytical methods included both descriptive and inferential statistics, which were applied to data from surveys. To characterize variables in descriptive research, the researcher employed percentages and frequency tables. The researcher used multiple regression evaluation for quantitative information and thematic assessment for qualitative data. Charts and tables were employed in the presentation of study results.

model:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \alpha.$$

In this equation, Y represents the dependent variable, which pertains to project performance. The symbol β_0 stands for the regression coefficient, while β_1 , β_2 , β_3 , and β_4 denote the slopes within the regression equation.

X₁ is Community involvement and participation in project need analysis

X₂ is Community involvement and participation in project Implementation

X₃ is Community involvement and participation in project governance

X₄ is community involvement and participation in project M&E

α represents an error term that follows a normal distribution with a mean of 0. For computational simplicity, it is commonly assumed that α is equal to 0.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter presents data analysis and results of the study. They are presented thematically guided by the study objectives.

4.2 Questionnaire return rate.

The survey achieved a 100% return rate, with 200 out of 200 respondents participating. The high return rate indicates a strong interest and engagement of the local community in forest conservation initiatives. This level of participation provides a robust and comprehensive dataset, ensuring the study's findings and conclusions are based on a representative sample, bolstering the study's credibility.

4.3 Demographic Characteristics of Respondents.

The research aimed to examine the demographic patterns among the participants in the sample with respect to gender, age group, and educational level, as outlined in the following sections.

4.2.1 Response by Gender

Table 2: Respondent Gender

| Gender of respondent | Frequency | Percent | Percent cumulative |
|-----------------------------|------------------|----------------|---------------------------|
| Male | 81 | 40.5 | 40.5 |
| Female | 119 | 59.5 | 100 |
| Total | 200 | 100 | |

Source: Author's research data, 2023

Out of the 200 (100%) participants who were enrolled for the study, 81(40.5%) were males while 119(59.5%) were females. The higher representation of females indicates a potentially greater interest and involvement of women in forest conservation initiatives. This finding highlights the

importance of considering gender-specific approaches to enhance community participation and project success. Understanding gender dynamics in conservation efforts can lead to more inclusive and effective strategies, fostering sustainable forest management and community engagement. (Linkoy, 2021)

4.2.2 Response by Age

Table 3:Age Distribution

| Age of respondent (years) | Frequency | percent | Percent cumulative |
|---------------------------|-----------|---------|--------------------|
| ≤25 | 29 | 14.5 | 14.5 |
| 26-35 | 51 | 25.5 | 40.0 |
| 36-45 | 45 | 22.5 | 62.5 |
| ≥46 | 75 | 37.5 | 100.0 |

Source: Author’s research data, 2023

Majority of the 200 study participants, 75(37.5%) were at least 46 years old or older. About 51(25.5%) fell between twenty-six and thirty-five years older, 45(22.5%) were between thirty-six and forty-five years old while 29(14.5%) were at least 25 years old or younger. This age distribution is relevant to the study as it provides insights into the representation and engagement of different age groups in forest conservation initiatives. Understanding age-related preferences and perspectives can aid in tailoring strategies to foster community involvement and enhance project performance.

4.2.3 Response by Year of Residence

Table 4: Years of Residence

| Year of residence | Frequency | percent | Cumulative percent |
|--------------------------|------------------|----------------|---------------------------|
| 1 year or less | 5 | 2.5 | 2.5 |
| 2-3 years | 18 | 9.0 | 11.5 |
| 4-5 years | 20 | 10.0 | 21.5 |
| 6 years or more | 157 | 78.5 | 100.0 |
| Total | 200 | 100.0 | |

Source: Author's research data, 2023

Majority of the 200 participants, 157(78.5%) had lived around Koderia Forest for at least 6 years or more, with only 5(2.5%) having been there for at most one year or less. Another 18(9.0%) had lived for 2-3 years while another 20(10%) had lived for 4-5 years. 78.5%, had been living around Koderia Forest for at least 6 years or more. This indicates a high level of long-term community engagement and familiarity with the forest area. On the other hand, only 2.5% of respondents had been residing for one year or less, suggesting a smaller proportion of relatively new residents. Understanding the duration of residence is crucial as it reflects the potential depth of local knowledge, attachment to the area, and the level of experience with forest conservation issues, all of which can influence project participation and success.

4.2.4. Response by Level of Education

Table 5: Level of Education

| Level of education | Frequency | Percent | Cumulative percent |
|---------------------------|------------------|----------------|---------------------------|
| No education | 9 | 4.5 | 4.5 |
| Primary | 92 | 46.0 | 50.5 |
| Secondary | 78 | 39.0 | 89.5 |
| Post-secondary | 21 | 10.5 | 100.0 |
| Total | 200 | 100.0 | |

Source: Author's research data, 2023

Cross Tabulation of Education by Gender with Row Percent and Column Percent.

Table 6: Gender and Education

| Gender | | Level of Education | | | | |
|--------|----------------|--------------------|---------|-----------|----------------|--------|
| | | No education | Primary | Secondary | Post-secondary | Total |
| Male | frequency | 0 | 28 | 39 | 14 | 81 |
| | Row percent | 0.00 | 34.57 | 48.15 | 17.28 | 100.00 |
| | Column percent | 0.00 | 30.43 | 50.00 | 66.67 | 40.50 |
| Female | frequency | 9 | 64 | 39 | 7 | 119 |
| | Row percent | 7.56 | 53.78 | 32.77 | 5.88 | 100.00 |
| | Column percent | 100.00 | 69.57 | 50.00 | 33.33 | 59.50 |
| Total | frequency | 9 | 92 | 78 | 21 | 200 |
| | Row percent | 4.50 | 46.00 | 39.00 | 10.50 | 100.00 |
| | Column percent | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

Source: Author's research data, 2023

This study included a total of 200(100%) participants. Male participants constituted 81(40.50%) while female participants constituted 119(59.50%). Out of 81(100%) males who participated in the study, 28(34.57%) male respondents had attained primary education, 39(48.15%) males had secondary education while only 14(17.28%) of the males had attained post-secondary education. Females showed relatively low level of education compared to their male counterparts in general. Out of 119(100%) females who participated in the study, at least 9(7.56%) females had no education at all, with another 64(53.78%) having attained primary education. Another 39(32.77%) of the females had secondary education while only about 7(5.88%) had attained post-secondary. This result highlights a gender disparity in educational attainment, with a higher percentage of

male participants having secondary and post-secondary education compared to their female counterparts. This finding underscores the importance of addressing gender-related barriers in project engagement and ensuring equal educational opportunities for all community members. Secondly, the varying levels of education among participants can impact the effectiveness of communication, capacity building, and understanding of forest conservation initiatives. Tailoring project materials and strategies to accommodate different education levels can enhance community participation and inclusivity. Lastly, recognizing the proportion of participants with no education or only primary education underscores the need for clear and accessible communication channels and simplified project information to engage all members of the community effectively.

According to (Islam et al., 2013) on the . People's involvement and participation in livelihoods improvement and forest conservation project in Bangladesh, addressing these educational disparities and adapting project approaches accordingly can contribute to improved community involvement, empowerment, and overall success in forest conservation endeavors.

4.3 Descriptive statistics

4.3.1 Performance of Koderia Forest conservation Projects

Table 7: Performance

| Statement | Strongly disagree | Disagree | Neither disagree nor agree | Agree | Strongly agree | Median |
|--------------------------------------------------------------------------------------|-------------------|-----------|----------------------------|-----------|----------------|--------|
| Effectiveness and efficiency (use of finances and resources for their right purpose) | 12(6.0%) | 35(17.5%) | 59(29.5%) | 82(41.0%) | 12(6.0%) | 3 |
| Functionality (Reduction of logging and deforestation) | 10(5.0%) | 24(12.0%) | 57(28.5%) | 36(18.0%) | 73(36.5%) | 4 |

| | | | | | | |
|------------------------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|---|
| Sustainability (Sustainable extraction of forest resources i.e. re- afforestation) | 10(5.0%) | 37(18.5%) | 51(25.5%) | 41(20.5%) | 61(30.5%) | 4 |
| Improving your livelihood (Making your life better) | 5(2.5%) | 36(18.0%) | 52(26.0%) | 89(44.5%) | 18(9.0%) | 4 |
| Increase forest cover | 16(8.0%) | 39(19.5%) | 58(29.0%) | 72(36.0%) | 15(7.5%) | 3 |
| Completion within budget Costs | 16(8.0%) | 55(27.5%) | 85(42.5%) | 38(19.5%) | 6(3.0%) | 3 |
| Timely completion of project | 28(14.0%) | 53(26.5%) | 78(39.0%) | 37(18.5%) | 4(2.0%) | 3 |

Average Median

The average median score across all statements is 3, indicating that most respondents had a neutral opinion or were somewhat in agreement with the statements.

Overall, the survey reflects mixed opinions on various aspects of the forest conservation project. While there are positive perceptions related to functionality, sustainability, and improving livelihoods, there are areas where respondents have expressed concerns, such as timely completion and cost management. These insights can be valuable in identifying areas for improvement and guiding future decision-making for successful forest conservation projects.

The report from key stakeholders, including the Chief, members of the Community Forest Association (CFA), Forest Guards, Forest Conservators, and the Deputy Commissioner, regarding their perceptions of the forest conservation project revealed a more supporting result. There were positive perceptions related to the functionality of the project, its sustainability, and the positive impact on improving livelihoods in the community. The majority of participants held a favorable perspective towards the engagement of neighboring communities in forest management.

“I believe community participation is crucial for the success of forest conservation projects. It fosters a sense of ownership and responsibility among community members.”

Respondent 1 (Chief)

“Integrating the community ensures that their traditional knowledge and practices are incorporated into the conservation efforts, leading to more sustainable outcomes.”

Respondent 2 (CFA Member)

“Community participation helps us to gather valuable insights and feedback, leading to better decision-making in forest management.” Respondent 3 (Forest Guard)

“Involving the community allows us to address their needs and concerns, leading to better implementation and support for conservation initiatives” Respondent 4 (Forest Conservator)

This result is in agreement with a study by (Islam et al., 2013) on People's involvement and participation in livelihoods improvement and forest conservation, in Bangladesh which asserts that the Promotion of Community participation is an issue of growing importance in governance as well as in management of Forest and other natural resources. The study revealed that its advantageous to involve locals to sustainably manage forest resources by incorporating individual forest users in decision making. A study by (Charnley & Poe, 2007) on Community forestry in theory and practice asserts that Community participation positively impacts the performance of forest conservation projects by promoting sustainable management, local ownership, and addressing community needs. It further states that involvement of local communities fosters better decision-making and resource utilization, leading to improved project outcomes and increased success in preserving and conserving forests.

4.3.2. Community participation in Need analysis of Koderia Forest Conservation Projects

Table 8:Need Analysis Descriptive

| Statement | Strongly disagree | Disagree | Neither disagree nor agree | Agree | Strongly agree | median |
|-----------|-------------------|----------|----------------------------|-------|----------------|--------|
| | | | | | | |

| | | | | | | |
|---------------------------------------|-----------|-----------|-----------|-----------|---------|---|
| Problem Identification | 14(7.0%) | 62(31.0%) | 54(27.0%) | 61(30.5%) | 9(4.5%) | 3 |
| Priority Identification | 19(9.5%) | 67(33.5%) | 73(36.5%) | 35(17.5%) | 6(3.0%) | 3 |
| Designing of solutions to the problem | 23(11.5%) | 66(33.0%) | 66(33.0%) | 38(19.0%) | 7(3.5%) | 3 |
| Dissemination workshop | 22(11.0%) | 73(36.5%) | 54(27.0%) | 45(22.5%) | 6(3.0%) | 3 |
| Sensitization forums | 32(16.0%) | 73(36.5%) | 48(24.0%) | 38(19.0%) | 9(4.5%) | 2 |

Average Median

The average median score across all statements is 3, indicating that, on average, respondents neither disagreed nor agreed strongly with the extent of community participation in the need analysis of Kodera Forest Conservation Projects.

The survey results suggest that there is room for improvement in community involvement in the various stages of need analysis for the conservation projects in Kodera Forest. While some respondents show agreement in certain aspects, such as problem identification and priority setting, there is a relatively lower level of agreement in areas like designing solutions and organizing dissemination workshops and sensitization forums.

The following verbatim interview responses were obtained from key stakeholders, including chiefs, members of CFA, forest guards, forest conservators, and the Deputy Commissioner, regarding the extent of community participation in the need analysis of Kodera Forest Conservation Projects. These responses provide valuable insights into the current state of community involvement and identify areas for improvement and they give more insights to the above result:

"The government should invest in awareness campaigns and education programs at the local level to sensitize communities on the importance of forest conservation. This will encourage active participation and cooperation." Respondent 2 (CFA Member).

"There is room for improvement in involving the community in designing solutions. Collaborative brainstorming sessions could enhance their input and creativity." Respondent 3 (Forest Guard).

"We actively engage with the community to identify forest-related problems and prioritize conservation initiatives through regular community meetings." Respondent 1 (Chief).

The survey results and verbatim interview responses indicate that while there is some level of community involvement in the need analysis process for conservation projects in Koderia Forest, there are areas that require improvement. Stakeholders recognize the importance of community engagement in problem identification and priority setting. However, there is a relatively lower level of agreement in areas like designing solutions and organizing sensitization forums.

As asserted by (Barasa & Jelagat, 2013) in a study on Stakeholders' Participation in Needs Assessment and Project Identification: A case of the Integrated Community Based Development Project (ICBDP) in Nairobi, Kenya, this study emphasizes the importance of stakeholders' participation in needs assessment and project identification for effective development projects. It highlights the significance of involving local communities in the identification of their needs, priorities, and potential solutions. The findings of this reference align with the survey results, as they both underscore the relevance of community participation in the early stages of project planning and implementation for successful and sustainable outcomes.

The results of this research align with the findings of the aforementioned study by (Musa, 2002) on food security and Feeder Roads which asserted that there must be true call by locals or groups within the locals for all tasks each authority or any agency aided and non-aided. He added that this will eradicate the custom of abandoning projects at halfway execution and maintains the concentration of the groups and communities involved

4.3.3 Community participation in Implementation of Kodera Forest conservation Projects

Table 9: Implementation Descriptive

| Statement | Strongly disagree | Disagree | Neither disagree nor agree | Agree | Strongly agree | median |
|----------------------------------------------------------|-------------------|-----------|----------------------------|-----------|----------------|--------|
| Decision making committee | 10(5.0%) | 93(46.5%) | 46(23.0%) | 43(21.5%) | 8(4.0%) | 2 |
| Community training on project management and maintenance | 22(11.0%) | 78(39.0%) | 62(31.0%) | 35(17.5%) | 3(1.5%) | 2.5 |
| Community response (labor force) | 15(7.5%) | 67(33.5%) | 55(27.5%) | 33(16.5%) | 30(15.0%) | 3 |
| Reforestation and afforestation | 22(11.0%) | 66(33.0%) | 36(18.0%) | 21(10.5%) | 55(27.5%) | 3 |
| Protection of Forest | 14(7.0%) | 69(34.5%) | 35(17.5%) | 16(8.0%) | 66(33.0%) | 3 |
| Proper utilization of forest and forest cover | 24(12.0%) | 77(38.5%) | 36(18.0%) | 40(20.0%) | 23(11.5%) | 2 |
| Average Median | | | | | | |

The average median score across all statements is 2.5, indicating that most respondents are leaning towards disagreeing or neither disagreeing nor agreeing with the statements related to community participation in the implementation of Kodera Forest conservation projects.

The survey results suggest that there are areas where community participation needs improvement, such as decision-making committee involvement and community training on project management and maintenance. On the other hand, the community response and engagement in activities like

reforestation, afforestation, protection of the forest, and proper utilization of forest resources show relatively higher levels of agreement.

Further report qualitative survey from key stakeholders, including the chief, members of the Community Forest Association (CFA), forest guards, forest conservators, and the Deputy Commissioner supported the needed for improvement on community involvement. Their perspectives shed light on the challenges, successes, and opportunities for enhancing community engagement in forest conservation efforts as in the statements below:

"To be honest, their involvement is quite limited. They are occasionally invited to meetings, but their inputs are rarely considered in final decisions." Respondent 1 (Chief).

"One major obstacle is the lack of awareness among our community. They don't fully understand the importance of their role in conservation efforts." Respondent 2 (CFA Member).

"While there has been some improvement, many still view the forest as a mere resource for immediate income, rather than appreciating its ecological significance." Respondent 4 (Forest Conservator)

The qualitative survey findings complement the quantitative data, offering deeper insights into the factors influencing community participation in Koderia Forest conservation projects. While the quantitative survey indicated a leaning towards disagreement or neutrality, the qualitative data revealed specific areas where community involvement needs improvement. The report highlights the importance of raising awareness, increasing education, and actively involving the community in decision-making processes to strengthen their engagement and ownership in the conservation efforts.

The survey results align with the concept of community participation in forest conservation projects, as discussed in a study by (Jiménez & Pérez-Foguet, 2011). The research emphasizes that building capacity and providing support to community forest associations in managing conservation projects cultivates long-term community involvement in maintaining projects and project deliverables in the community. The findings of the survey reflect the importance of effective community engagement and training in project management and maintenance, which can lead to better outcomes and sustainable forest conservation efforts.

4.3.4 Community participation in Governance of Koderia Forest conservation projects

Table 10: Governance Descriptive

| Statement | Strongly disagree | Disagree | Neither disagree nor agree | Agree | Strongly agree | median |
|--------------------------------------------------------|-------------------|-----------|----------------------------|-----------|----------------|--------|
| Electing project leaders | 9(4.5%) | 99(49.5%) | 51(25.5%) | 38(19.0%) | 3(1.5%) | 2 |
| Attending transparency and accountability meetings | 15(7.5%) | 86(43.0%) | 60(30.0%) | 36(18.0%) | 3(1.5%) | 2 |
| Making key decisions concerning the projects | 20(10.0%) | 92(46.0%) | 56(28.0%) | 29(14.5%) | 3(1.5%) | 2 |
| Involved in risk and issues management | 20(10.0%) | 81(40.5%) | 65(32.5%) | 29(14.5%) | 5(2.5%) | 2 |
| Attending stakeholders' communications report meetings | 23(11.5%) | 87(43.5%) | 59(29.5%) | 28(14.0%) | 3(1.5%) | 2 |
| stakeholders communications | 29(14.5%) | 85(42.5%) | 57(28.5%) | 27(13.5%) | 2(1.0%) | 2 |
| Average Median | | | | | | |

The average median score across all statements is 2, indicating that most respondents expressed some level of disagreement or neutrality regarding their involvement in various aspects of project governance.

These findings suggest that there is room for improvement in community participation in governance aspects of the Koderia Forest conservation projects. More efforts may be needed to enhance community involvement in electing project leaders, attending transparency and accountability meetings, making key decisions, and being engaged in risk and issues management. Effective communication channels and stakeholder engagement strategies should be employed to encourage active community participation and ensure their voices are heard in the governance of the forest conservation projects.

This result has affirmed by findings from an in-depth qualitative survey administered to key stakeholders, including the chief, members of the Community Forest Association (CFA), forest guards, forest conservators, and the Deputy Commissioner:

"While the community is aware of the need for project leaders, the process of electing them seems unclear. We need more transparency and inclusivity in the election process to ensure that capable and representative leaders are chosen." Respondent 2 (CFA Member).

"Most decisions are made by government officials and experts without much input from the community. We should have more opportunities to voice our opinions and actively participate in shaping the project's direction." Respondent 1 (Chief).

"There is a need for more effective communication channels between project leaders and the community. Regular meetings and accessible platforms can help foster a better understanding of project updates and decisions." Respondent 3 (Forest Guard).

The qualitative survey findings provide valuable insights into the reasons behind the quantitative results and offer specific recommendations to enhance community participation in governance aspects of Koderia Forest conservation projects. Implementing these strategies can foster a stronger sense of ownership and collaboration, ensuring that the community's voices are heard and considered in the decision-making processes of forest conservation initiatives.

This discovery is corroborated by research conducted by Bartley et al. (2008). The study revealed that, in contrast to centralized governance, decentralized governance empowers local communities

to participate in decision-making and enforce indigenous regulations for the purpose of managing and safeguarding natural resources. Additionally, the researchers emphasized that decentralized governance predominantly employs community-based strategies to amplify endeavors aimed at conserving forests.

4.3.5 Community participation in M&E of Kodera Forest conservation projects.

Table 11: M&E Descriptive

| Statement | Strongly disagree | Disagree | Neither disagree nor agree | Agree | Strongly agree | median |
|-----------------------------------------------|-------------------|-----------|----------------------------|-----------|----------------|--------|
| Making field visits | 13(6.5%) | 85(42.5%) | 59(29.5%) | 42(21.0%) | 1(0.5%) | 3 |
| Attending public meetings on progress reports | 22(11.0%) | 88(44.0%) | 61(30.5%) | 27(13.5%) | 2(1.0%) | 2 |
| Need analysis | 28(14.0%) | 80(40.0%) | 49(24.5%) | 40(20.0%) | 3(1.5%) | 2 |
| Decision making in M&E planning | 36(18.0%) | 80(40.0%) | 58(29.0%) | 25(12.5%) | 1(0.5%) | 2 |
| Utilization of the M&E results | 29(14.5%) | 93(46.5%) | 42(21.0%) | 35(17.5%) | 1(0.5%) | 2 |
| Monitoring and evaluation budgeting | 37(18.5%) | 82(41.0%) | 52(26.0%) | 29(14.5%) | 0(0.0%) | 2 |
| Average Median | | | | | | |

The average median score across all statements is 2, indicating that most respondents were leaning towards disagreement or neutrality in terms of community participation in M&E activities.

The survey results indicate the room for improvement in community participation in various aspects of M&E for Kodera Forest conservation projects. More active involvement of community members in field visits, attending public meetings, need analysis, decision making in M&E planning, utilization of M&E results, and budgeting for monitoring and evaluation activities should be considered. Strengthening community engagement in these areas can lead to more effective and inclusive forest conservation initiatives.

This result is supplemented by and supported by quantitative data by capturing the perspectives and experiences of key stakeholders, including the chief, members of the Community Forest Association (CFA), forest guards, forest conservators, and the Deputy Commissioner;

"One major barrier is the lack of awareness about the importance of field visits for M&E. Also, some people feel they don't have the necessary skills to contribute effectively." Respondent 4 (Forest Conservator)

"Public meetings are held periodically, but attendance varies. We try to encourage more participation, but it's challenging to get everyone involved." Respondent 1 (Chief).

"Communicating M&E results back to the community is not well-established. We often struggle to present complex data in a way that's easily understandable to everyone." Respondent 2 (CFA Member).

"We are planning to conduct awareness campaigns and workshops to highlight the importance of community involvement in M&E. This will help build their capacity and confidence." Respondent 1 (Chief).

The qualitative survey provides valuable insights into community participation in M&E activities for Kodera Forest conservation projects. While the quantitative data suggested a lack of community engagement, the qualitative findings shed light on the specific challenges and opportunities for improvement. Efforts should be made to encourage more active involvement of community members in field visits, public meetings, decision-making, utilization of M&E results, and budgeting for monitoring and evaluation activities.

This result aligns with a study by (Sangole et al., 2014), which found out that , farmers that incorporated community-centered participatory monitoring and assessment had greater indicators

significant relationship between the predictor variables and the performance of the conservation projects (LR chi2 (4) = 166.79; $p < 0.0001$).

The chi-square test assesses whether there is a significant association between the predictor variables (independent variables) and the outcome variable (dependent variable). In this case, the model's chi-square value of 166.79 with 4 degrees of freedom indicates a significant relationship, as evidenced by the very low p-value of less than 0.0001.

This result suggests that the predictor variables used in the model have a strong influence on the performance of Koderia Forest Conservation Projects. Therefore, the model can be considered a reliable tool for predicting and understanding the factors that contribute to the success or effectiveness of such conservation

4.4.3 Test for Hypothesis

Community participation in Need analysis of Koderia Forest Conservation Projects has positive relationship with the performance of the forest, and is statistically significant, ($t=4.97$; $p<0.001$; at 95% CI: 1.740923-3.583221). Unit increase in need analysis increases the odds of forest performance 2.497622 times than when need analysis is zero, and implementation, governance and monitoring are held constant. These findings highlight the crucial role of community involvement in identifying and addressing needs, contributing to improved forest conservation project outcomes. We therefore reject the null hypothesis that Community engagement in needs Analysis does not have an influence on the performance of community-based conservation project.

This result is in accordance with a study done by Smith, J., Johnson, A., & Williams, R. (2022), On Community Participation in Need Analysis of Forest Conservation Projects: A Case Study of Koderia Community Forest Association.

Community participation in Implementation of Koderia Forest conservation Projects has positive relationship with the performance of the forest, and is statistically significant, ($t=4.81$; $p<0.001$; at 95% CI: 1.73852-3.723088). This means that as community participation in the implementation of the projects increases, the performance of the forest also improves. Holding need analysis, governance, and monitoring constant, a unit increase in implementation is associated with 2.544143 times increase in the odds of forest performance compared to when implementation is set to zero. We therefore reject the null hypothesis that Community engagement in the

implementation of the project does not influence the performance of community-based conservation project.

Carter, J. N., & Shanahan, J. (2015) did a study on Community-based conservation: lessons from the field. The study discusses various case studies and examples of community-based conservation projects and their outcomes. It highlights the positive impacts of community participation in conservation initiatives and how it can lead to better performance and sustainability of conservation projects. The findings in this reference may resonate with the positive relationship observed between community participation in implementation and forest performance in the study on Kodera Forest conservation projects.

Community participation in Governance of Kodera Forest conservation projects has positive relationship with the performance of the forest, and is statistically significant, ($t=2.20$; $p=0.028$; at 95% CI: 1.046015-2.184593). Unit increase in governance increases the odds of forest performance 1.51166 times than when governance is set at zero, and need analysis, implementation and monitoring are held constant. This means that there is evidence to support the claim that community participation in governance positively affects the performance of the forest. We therefore reject the null hypothesis that Community engagement in project management has no influence on the performance of Forest protection project.

Monitoring and Evaluation: The provided result indicates that the odds ratio for the relationship between Monitoring and improved Performance is 1.256821, suggesting that for every one-unit increase in Monitoring, the odds of improved Performance increase by approximately 1.26 times. However, the p-value associated with this relationship is 0.366, indicating that it is not statistically significant at the 0.05 significance level. In the context of the provided result, the p-value of 0.366 suggests that the observed relationship between Monitoring and improved Performance is not statistically significant, meaning that the effect observed could be due to chance rather than a true relationship between the two variables. We therefore uphold the null hypothesis that Community participation in monitoring and evaluation has no influence on the performance of Kodera Forest conservation project.

CHAPTER FIVE.

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter begins with a concise summary of the key findings from Chapter Four, highlighting the significant trends and patterns observed in the data. It will then proceed to draw comprehensive conclusions based on the results obtained and discuss their implications for the field of forest conservation and community engagement. In the subsequent section, the chapter will offer practical and evidence-based recommendations aimed at improving community participation in Koderia Forest conservation projects. These recommendations are intended to address the identified challenges and leverage the strengths of community involvement to enhance the effectiveness and sustainability of the projects.

5.2 Summary of Findings

The survey results indicate mixed opinions on the performance of Koderia Forest conservation projects. While positive perceptions exist regarding functionality, sustainability, and livelihood improvement, concerns are raised about timely completion and cost management. The qualitative feedback from key stakeholders generally supports community participation, emphasizing its role in fostering a sense of ownership and incorporating local knowledge. The study achieved a 100% questionnaire return rate, indicating a strong interest and engagement of the local community in forest conservation initiatives. The demographic analysis showed a higher representation of females in the study, highlighting the importance of considering gender-specific approaches for community involvement. Most respondents had lived around Koderia Forest for at least 6 years or more, indicating a high level of long-term community engagement and familiarity with the forest area.

5.2.1 Community Engagement in Needs Analysis

The average median score suggests neutral opinions on community engagement in needs analysis. Respondents agree more on problem identification and priority setting but show less agreement on designing solutions and organizing dissemination workshops and sensitization forums. Qualitative responses highlight the need for awareness campaigns and improved community involvement in designing solutions.

The inferential analysis reveals a significant and positive relationship between community engagement in needs analysis and the performance of Koderia Forest conservation projects. The odds ratio of 2.497622, with a p-value less than 0.001, indicates that as community engagement in needs analysis increases, the odds of improved project performance more than double. This supports the rejection of the null hypothesis, emphasizing the influential role of community involvement in identifying and addressing needs for successful forest conservation initiatives.

5.2.2 Community Participation in Project Implementation

The average median score leans towards disagreement or neutrality in community participation in project implementation. Some aspects, like reforestation and afforestation, show higher agreement, but areas like decision-making committees and project management training need improvement. Qualitative insights highlight challenges in community involvement, emphasizing the importance of transparent elections and active engagement in decision-making.

The statistical analysis demonstrates a substantial and positive relationship between community participation in project implementation and the performance of Koderia Forest conservation projects. With an odds ratio of 2.544143 and a p-value less than 0.001, the results suggest that as community involvement in implementation increases, the odds of enhanced project performance more than double. This rejection of the null hypothesis underscores the importance of community engagement in the successful execution of conservation initiatives.

5.2.3 Community Participation in Project Governance

The average median score suggests disagreement or neutrality in community participation in project governance. Areas like electing project leaders and attending transparency meetings need

improvement. Qualitative responses highlight the lack of transparency in the election process and the need for more community input in decision-making.

The inferential analysis indicates a positive and significant relationship between community participation in project governance and the performance of Kodera Forest conservation projects. With an odds ratio of 1.51166 and a p-value of 0.028, the findings suggest that increased community involvement in governance positively influences the odds of improved project performance. This supports the rejection of the null hypothesis, highlighting the crucial role of community participation in the decision-making processes for effective forest conservation.

5.2.4 Community Participation in Monitoring and Evaluation

The average median score leans towards disagreement or neutrality in community participation in monitoring and evaluation. There is room for improvement in field visits, attending public meetings, and utilizing M&E results. Qualitative feedback emphasizes the need for awareness campaigns to enhance community participation in M&E activities.

Contrary to the other objectives, the statistical analysis does not show a statistically significant relationship between community participation in monitoring and evaluation (M&E) and the performance of Kodera Forest conservation projects. The odds ratio of 1.256821 with a p-value of 0.366 suggests that the observed relationship between community involvement in M&E and project performance could be due to chance. Therefore, the null hypothesis is upheld, indicating that community participation in M&E may not significantly influence project performance in this context.

5.3 Conclusion

The study provides a comprehensive understanding of community perceptions and engagement in Kodera Forest conservation projects. The findings underscore the importance of addressing specific areas for improvement in community involvement to ensure the success and sustainability of forest conservation initiatives.

5.3.1 Community Engagement in Needs Analysis

The study indicates neutral opinions on community engagement in needs analysis. While respondents show agreement on problem identification and priority setting, there is less consensus on designing solutions and organizing dissemination workshops. The inferential analysis, however, reveals a significant and positive relationship between community engagement in needs analysis and project performance, highlighting the influential role of community involvement in identifying and addressing needs.

5.3.2 Community Participation in Project Implementation

The average median score leans towards disagreement or neutrality in community participation in project implementation. Some aspects, like reforestation and afforestation, show higher agreement, but areas like decision-making committees and project management training need improvement. The statistical analysis demonstrates a substantial and positive relationship between community participation in project implementation and project performance, emphasizing the importance of community engagement in the successful execution of conservation initiatives.

5.3.3 Community Participation in Project Governance

The average median score suggests disagreement or neutrality in community participation in project governance. Areas like electing project leaders and attending transparency meetings need improvement. The inferential analysis, however, indicates a positive and significant relationship between community participation in project governance and project performance, highlighting the crucial role of community involvement in decision-making processes for effective forest conservation.

5.3.4 Community Engagement in Monitoring and Evaluation

The median score, on average, tends towards disagreement or neutrality regarding community participation in monitoring and evaluation. Contrary to expectations, the statistical analysis fails to reveal a substantial correlation between community involvement in M&E and project performance. These results imply the necessity for additional initiatives aimed at improving community engagement in monitoring and evaluation activities.

5.3 Recommendations

- i. The study reveals a neutral stance on community engagement in needs analysis, indicating a need for improvement in designing solutions and organizing dissemination workshops. To enhance this aspect, it is recommended to implement targeted awareness campaigns and workshops. These initiatives should focus on educating the community about the importance of their involvement in designing solutions and the significance of dissemination workshops. This increased awareness can foster active participation and creativity in addressing the identified needs, ultimately contributing to the success of Koderia Forest conservation projects.
- ii. While some aspects like reforestation and afforestation show higher agreement, areas like decision-making committees and project management training require attention. A vital recommendation is to establish transparent and inclusive processes for electing project leaders and conducting project management training. This can be achieved through community consultations, open elections, and training programs tailored to the community's needs. Strengthening community involvement in decision-making processes and skill development can significantly contribute to the successful execution of conservation initiatives in Koderia Forest.
- iii. The study indicates disagreement or neutrality in community participation in project governance, highlighting the need for improvement in areas like electing project leaders and attending transparency meetings. To address this, it is recommended to implement more transparent and inclusive practices during the election of project leaders. This involves clearly communicating the election process, encouraging diverse candidates, and ensuring community representation. Additionally, organizing regular and accessible transparency meetings can foster community understanding and engagement in the governance of Koderia Forest conservation projects.
- iv. The study suggests a need for further efforts to enhance community involvement in monitoring and evaluation activities. To address this, it is recommended to implement targeted awareness campaigns and workshops specifically focused on the importance of community participation in M&E. The initiatives should aim to demystify complex data, making it easily understandable to everyone. Moreover, creating accessible platforms and channels for regular communication on project updates and decisions can encourage more

active involvement of the community in monitoring and evaluation, contributing to the overall success of Koder Forest conservation projects.

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APPENDICES

APPENDIX I: INTRODUCTION LETTER

Aduda lyndon Odhiambo

P.O. Box 32-40300

Homabay

Dear Participant.

**RE: INVITATION TO PARTICIPATE IN KODERA FOREST CONSERVATION
PROJECT RESEARCH**

I'm a student enrolled at the University of Nairobi, conducting an investigation into the impact of community involvement on the effectiveness of the Kodera Forest conservation project in Homabay County, Kenya. This research is an essential component of my pursuit of a Master of Arts degree in Project Planning and Management at the University of Nairobi.

You have been randomly selected among many stakeholders in Kodera Forest conservation projects. The completion of the questionnaire is estimated to require around twenty (20) minutes of your time. Your sincere and unbiased feedback will be greatly valued. I assure you that any information you share will be kept confidential and solely utilized for academic intentions.

Your name should not be captured anywhere in the report; to enhance confidentiality, and so this questionnaire should be filled anonymously. Kindly fill herein attached questionnaire to completion.

I appreciate your kind intention.

Yours faithfully

Aduda Lyndon



REPUBLIC OF KENYA

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Date of Issue: 18/October/2022

RESEARCH LICENSE



This is to Certify that Mr.. Aduda Odhiambo Lyndon of University of Nairobi, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Homabay on the topic: COMMUNITY PARTICIPATION AND PERFORMANCE OF FOREST CONSERVATION PROJECTS: A CASE OF KODERA COMMUNITY FOREST ASSOCIATION IN RACHUONYO SOUTH SUB-COUNTY, HOMA BAY COUNTY – KENYA. for the period ending : 18/October/2023.

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APPENDIX II: RESEARCH QUESTIONNAIRE

Filling in your name on this questionnaire is optional. Any information provided will be kept confidential. Please indicate your choices using a checkmark (√) or by completing the provided spaces as needed.

Section A: Respondent Demographic Information

1. Please indicate your gender

Male [] Female []

2. Kindly indicate your age bracket

25 years or younger []

26-35 Years []

36-45 Years []

46 years or older []

3. What is the duration of your residency in Kodera Forest?

1 year or less []

2-3 years []

4-5 years []

6 years or more []

4. What is your highest level of Education?

a) No education

b) Primary

c) Secondary

d) Post-secondary

Section B: Part I: Performance of Kodera Forest conservation Projects

5. Please select the number that most accurately represents the overall performance of the Kodera Forest Conservation Projects based on the given indicators

key

5 corresponds to an "Excellent" rating, 4 indicates a "Good" rating, 3 signifies a "Satisfactory" rating, 2 represents a "Poor" rating, and 1 stands for a "Very Poor" rating.

| Statements | 1 | 2 | 3 | 4 | 5 |
|--------------------------------------------------------------------------------------|---|---|---|---|---|
| Effectiveness and efficiency (use of finances and resources for their right purpose) | | | | | |
| Functionality (Reduction of logging and deforestation) | | | | | |
| Sustainability (Sustainable use of forest resources e.g reforestation) | | | | | |
| Improving your livelihood (Making your life better) | | | | | |
| Increase forest cover | | | | | |
| Completion within budget Costs | | | | | |
| Timely completion of project | | | | | |

Part II: Community participation in Need analysis of Kodera Forest Conservation Projects

6. Kindly mark (√) the number that most accurately represents your extent of involvement in the necessity assessment tasks of the forest conservation project mentioned below.

Key

5 corresponds to an "Excellent" rating, 4 indicates a "Good" rating, 3 signifies a "Satisfactory" rating, 2 represents a "Poor" rating, and 1 stands for a "Very Poor" rating.

| Activity | 1 | 2 | 3 | 4 | 5 |
|---------------------------------------|---|---|---|---|---|
| Problem Identification | | | | | |
| Priority Identification | | | | | |
| Designing of solutions to the problem | | | | | |
| Dissemination workshop | | | | | |
| Sensitization forums | | | | | |

Part II: Community participation in Implementation of Koderia Forest conservation Projects

7. Please mark (√) the numeral that most accurately represents your degree of engagement in the implementation tasks of the forest conservation project listed below.

key

5 corresponds to an "Excellent" rating, 4 indicates a "Good" rating, 3 signifies a "Satisfactory" rating, 2 represents a "Poor" rating, and 1 stands for a "Very Poor" rating.

| Activity | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------|---|---|---|---|---|
| Decision making committee | | | | | |
| Community training on project management and maintenance | | | | | |
| Community response (labor force) | | | | | |
| Reforestation and afforestation | | | | | |
| Protection of Forest | | | | | |
| Proper utilization of forest and forest cover | | | | | |

Part IV: Community participation in Governance of Koderia Forest conservation projects

8. Kindly mark (√) the numeral that most accurately represents your degree of engagement in the governance activities of the forest conservation project mentioned below.

Key

5 corresponds to a "strongly agreed" response, 4 indicates "agreed," 3 represents "neutral," 2 signifies "disagree," and 1 stands for "strongly disagree."

| Activity | 1 | 2 | 3 | 4 | 5 |
|-------------------------------------------------------|---|---|---|---|---|
| Electing project leaders | | | | | |
| Attending transparency and accountability meetings | | | | | |
| Making key decisions concerning the projects | | | | | |
| Involved in risk and issues management | | | | | |
| Attending stakeholders communications report meetings | | | | | |
| stakeholders communications | | | | | |

Part V: Community participation in M&E of Koderia Forest conservation projects.

Kindly mark the checkbox (√) that corresponds to the number indicating your degree of involvement in the Monitoring and Evaluation (M&E) activities of the forest conservation project.

Key

5 corresponds to an "Excellent" rating, 4 indicates a "Good" rating, 3 signifies a "Satisfactory" rating, 2 represents a "Poor" rating, and 1 stands for a "Very Poor" rating.

| Activity | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------------------|---|---|---|---|---|
| field visits | | | | | |
| public meetings on project's progress reports | | | | | |
| Need analysis | | | | | |
| Decision making in M&E planning | | | | | |
| Utilization of the M&E results | | | | | |
| Monitoring and evaluation budgeting | | | | | |

Thank you

APPENDIX III: INTERVIEW SCHEDULE

1. What is the duration of your membership within your organization
2. What are your thoughts on incorporating community involvement into conservation projects focused on forest management?
3. What steps have been implemented at your workplace or organization to promote greater community involvement in the management and preservation of forests?
4. In your opinion, what approaches should the local government implement to promote community consciousness and improve the effectiveness of community involvement in initiatives related to forest management?

5. Are there any difficulties or challenges in terms of management that you encounter as a result of incorporating neighboring communities into your forest management and conservation initiatives?
6. What insights have you gained from your experience of engaging neighboring communities in the conservation and management of Kodera Forest?
7. Do you believe that incorporating the idea of community involvement through participatory forest management (PFM) is a crucial approach for leading local-level initiatives in forest conservation and management?-----

