LOCAL COMMUNITY PARTICIPATION IN CATCHMENT RESTORATION IN AWOJA, UGANDA

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J23M02/009

A DISSERTATION SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A DEGREE OF MASTER OF ARTS IN ORGANIZATIONAL LEADERSHIP AND MANAGEMENT OF UGANDA CHRISTIAN UNIVERSITY

March, 2026

UGANDA CHRISTIAN UNIVERSITY

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Declaration

I, **Harriet Drani Maturu** hereby declare that this research Project is my original work and has not been presented for a degree or any other academic award in any university or institution of learning.

Signature:  Date: 16/03/2026

Approval

This is to certify that this study has been carriet out under my supervision and has been submitted with my approval as partial fulfillment for the award of the degree of Masters of Arts in Organisational Leadership and Management of Uganda Christian University.

Joseph Jakisa Owor, PhD

March 16, 2026

Dedication

This work is dedicated to my family, most especially to my dear husband, Mr. Gore Goffin, children; Gore Goffin Prudence, Gore Goffin Precious, Gore Goffin Peculiar, Gore Providence Angel and Gore Petra Peace, for their enormous moral support throughout the pursuit of this Course. To my parents, Mr. Drani Elias and Mrs. Eunice Drani, for inspiring and encouraging me to aim higher in my academic aspirations.

Acknowledgement

Foremost, I thank the Almighty God for His grace that sustained me throughout the research process, without Whom I would never have completed this research.

I am greatly indebted to my research Supervisor, Dr. Joseph Jakisa Owor, for his invaluable guidance and support throughout the research process. His timely feedback was very instrumental to the successful completion of this thesis, and I am very grateful for his unwavering dedication.

I extend my sincere thanks to the field data collection team, for their commitment and integrity that enabled me to collect data within the required time. Special thanks to Ms. Ann Nakayenze, who led the team and offered the required guidance to them.

Abstract

This action research examined the participation of the local community in catchment restoration in Awoja catchment, Kyoga Water Management Zone, in Eastern Uganda to obtain insights into the strategies that could be applied to improve participation in future catchment restoration projects. The research aimed to understand how the local community participated in catchment restoration, how the local community perceived were the factors that enabled their participation in catchment restoration activities, how the local community perceived were the factors that hindered their participation in catchment restoration activities, and how the level of local community participation in catchment restoration in Awoja Catchment was characterized, in the catchment restoration project of the Ministry of Water and Environment which was designed to be community-led. Data was gathered through surveys, interviews, focus group discussions, and documentary analysis. Simple random sampling and purposive sampling were used to select the respondents. Findings showed that local community participation varied across the different stages of the catchment restoration project. Local community participation was largely excluded in the design phase. Findings showed absence of community participation in the project's design phase, moderate participation in monitoring, very minimal participation in the evaluation of the project, and high participation in the implementation phase. The study concluded that the overall participation of the local community was moderate, and suggested adherence to policy implementation, strengthened incentive mechanisms, capacity building and empowerment, strengthened monitoring and evaluation function, transparent and culturally responsive communication systems, and development of structured post-project transition strategies to improve the level of local community participation in catchment restoration.

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Chapter One: Introduction

Situation Description

Uganda has rich natural resources that are essential for sustaining life, promoting development, and maintaining the environment through the provision of critical ecosystems and socio-economic, cultural, and aesthetic services. However, these resources are increasingly coming under threats due to poor management, over-exploitation, increased urbanization and industrialization, pollution, and climate change. The increasing population has led to land fragmentation, which has forced the communities to engage in farming activities in ecologically sensitive and fragile areas such as wetlands, riverbanks, and protected forests, which are susceptible to soil erosion, soil fertility loss, and flash floods. Coupled with pollution from the use of agrochemicals, surface water and groundwater quality have equally been affected, posing water quality and quantity challenges to sufficiently support socio-economic development.

Over the years, several actions have been undertaken by government ministries and departments, districts, Non-Governmental Organizations, and others to protect and sustain water resources-related investments and activities and enhance the productivity of watersheds through donor funds and nationally generated revenue. However, the sustainability of these interventions has been presented as a challenge. The previous years have shown the failures of top-down approaches to natural resources management, demonstrated by project failures. The probable cause for these failures has been attributed to the limited or absence of community participation in the management interventions.

In the 1990s, international development organizations like the World Bank insisted on the important role of stakeholders' participation to guarantee the sustainability of development projects, which could in turn contribute to the larger idea of sustainable national

development. This became a donor condition for developing countries like Uganda to access development funds.

In 2005, Uganda undertook a major policy reform in the management of its water resources, from a centralized and top-down approach to a more participatory "bottom-up" approach termed the Catchment-based Integrated Water Resources Management. The shift in the concept has occurred in recognition of the experience that community collaboration, participation, and management are key to realizing both short-term development results and long-term sustainability. This approach places communities at the center of developing and managing water and related resources, and with emphasis placed on communities to evaluate their problems, prioritize them, and propose possible interventions to solve these problems.

To implement the catchment-based integrated approach to water resources management, the government of Uganda, through its Directorate of Water Resources Management of the Ministry of Water and Environment, undertook a participatory development and approval of the Awoja catchment Management Plan in 2015. Several interventions from this plan are already being implemented through projects, among which is the World Bank-funded Integrated Water Management and Development project.

In the Awoja catchment, activities of the Integrated Water Management and Development project were implemented from 2018 to 2023 in Kapchorwa district. The project aimed to support the local communities in implementing priority catchment management measures, intended to improve soil and water conservation, riverbank restoration, and community livelihood. These activities mainly included soil and water conservation measures, riverbank restoration, on-farm and homestead tree planting, community livelihood improvement interventions, capacity building of communities, water user groups, and District Local Government staff, among other activities. Once implemented,

the interventions were expected to greatly enhance the productivity and protection of the Awoja catchment and improve people's livelihoods beyond the project lifespan.

Despite the participation of the local community in groups, the restoration of the Awoja catchment through the project was not fully realized in 2023. Whereas the approach of the project was community-led, the available documentation points towards the limited direct involvement of the local communities in the design of the project. As such, the income-generating activities provided by the project as alternative livelihood options were different from the actual priorities demanded by the local communities in the project areas. As a result, those who were selected to benefit from the enterprises, such as the energy-saving cook stoves, did not maintain them well, while others abandoned their use when they broke down during use. The tree seedlings and grasses planted along the river banks to stabilise the landscape were considered an opportunity lost for the growth of food crops. This was especially when the local communities perceived the income-generating activities offered to them as non-beneficial to them in terms of realising actual cash in their pockets to supplement household income. As a result, some of the community members began to encroach on the river banks to grow crops even before the close of the restoration project. Cases of non-maintenance and destruction of the soil and water conservation structures were also reported before the end of the project, especially by those who had big farmlands, as they were considered to be labour-intensive. In the absence of the realization of cash from the income-generating activities, they did not have the financial capability to hire additional labour to maintain the structures on their farms. To date, this catchment faces continuous degradation in the areas where the project was implemented. If this trend continues, the achievement of the objectives of the integrated water resources management and development project might be far from reality. My Action Question, therefore, is: How can

the Ministry of Water and Environment improve local community participation in catchment restoration in Awoja?

Research Questions

Action Question

How can the Ministry of Water and Environment improve local community participation in catchment restoration in Awoja?

Central Research Question

What strategies can be applied to improve the level of local community participation in future catchment restoration in Awoja?

Subsidiary Insight Questions

1. How does the local community participate in catchment restoration activities?
2. How does the local community perceive the factors that enable their participation in catchment restoration activities?
3. How does the local community perceive the factors that hinder their participation in catchment restoration activities?
4. How is the level of local community participation in catchment restoration in Awoja Catchment characterized?

Chapter Two: Literature Review

This chapter presents review of literature from other studies that have been conducted on local community participation in catchment restoration efforts that guided the study. It entails themes and subthemes emanating from both the central research question and the subsidiary insight questions, which include catchment restoration and the need for community participation, how the local community participated in catchment restoration, how the local community perceive are the factors that enable their participation, how the local community perceive are the factors that hinder their participation, how the level of local community participation in catchment restoration in Awoja catchment is characterized, and the strategies to improve local community participation in catchment restoration.

Several studies have been done on local community participation in catchment management and restoration. The findings confirm that the participation of local communities is still largely a challenge that needs to be addressed holistically. With the increasing awareness and knowledge about the fundamental human rights among the communities, such as the right to information and participation, the necessity to get involved in the affairs of their lives can no longer be overlooked and suppressed. Research also points out that some efforts have been made by governments and development agencies to provide solutions to safeguard the local communities against exclusion from their participation in catchment management.

Catchment Restoration

There is a global acceleration in efforts to adopt more holistic and integrated approaches to manage water environments, Jakeman, & Letcher, (2007); Bos, & Brown, (2015). On their part, Rollason, Bracken, Hardy, & Large, (2018) recognized the need to manage the water environment more holistically, and their works have resulted in the global growth of Integrated Catchment Management (ICM). The call for integrated catchment

management is considered a horizontal combination that inspires interdisciplinary working between traditionally disparate management sectors, alongside vertical integration, characterized by the engagement of communities, and the promotion of participatory governance and management decision-making (Rollason, Bracken, Hardy, & Large, 2018). In both instances, communities are seen to play an important role in the protection of streams.

The goal of catchment arrangements is to prioritize measures that reverse the decline of biological communities (Robins et al., 2025). Here, all activities involve harmonizing stakeholders and schedules to advance the general health of the catchment and the quality of associated services for communities, considering issues like water quality, water quantity, and the health of ecosystems. That means that understanding public support for ecosystem restoration is critical to the successful implementation because the sustainability of wide-ranging resource management is rooted in stakeholders' support (Garcia, Benages-Albert, Buchecker, & Vall-Casas, 2020).

Having widespread community support in any catchment management is essential for restoration and any related plan. Understanding community participation, the dynamics of coordination, engagement, management, and sustainability of such activities has been earmarked as a huge challenge (Barrett, Kurian, Simmonds, & Cretney, 2019; Scoggins, et al., 2022). To some scholars like Garcia, Benages-Albert, Buchecker, & Vall-Casas, (2020), this is to some extent attributed to humans who cause degradation of rivers and streams, and are called upon to provide valuable restoration activities. In this study, catchment management plans and community participation will be looked at expansively in order to establish practical ways of sustainable community participation in catchment areas.

The Need for Community Participation and Catchment Restoration

The Holy Bible in Genesis 2:15 enlightens us that God has commanded all mankind to take the responsibility to care for the earth, which also includes water resources. In this

portion of scripture, Adam was placed in the Garden of Eden to cultivate, nurture, and preserve it. *"So the Lord God took the man (He had made) and settled him in the Garden of Eden to cultivate and keep it"*. The cultivation and keeping, which is the cultural or development mandate from God, I believe involves behaviors and actions, including decision making, to ensure that the different kinds of creatures of the same species are maintained in their right balance, as well as to multiply others, for the continued flourishing to sustain the wellbeing of mankind, as commanded by God in Leviticus 19:23, *"When you enter the land and plant all kinds of trees for food…"*.

"When you besiege a city for a long time, making war against it in order to capture it, you shall not destroy its (fruit bearing) trees by swinging an axe against them; for you may eat from them, and you shall not cut them down….." Deuteronomy 20:19

"Isn't it enough for you to feed on the good pasture? Must you also trample the rest of the pasture with your feet? Or isn't it enough that you drink the clear water? Must you also muddy the rest with your feet?" Ezekiel 34:18

As we continue to utilize the natural resources which God has commanded us to take care of, we are warned and commanded in the Bible not to destroy them, but rather nurture them by equally granting them rest to rejuvenate so that we get the best out of them for our flourishing. For instance, in Leviticus 25: 2-4, God commanded the Israelites to cultivate and use the land for six years and to give it rest on the seventh year. *"Speak unto the children of Israel, and say unto them, When ye come into the land which I give you, then shall the land keep a sabbath unto the Lord. Six years thou shalt sow thy field, and six years thou shalt prune thy vineyard, and gather in the fruit thereof; But in the seventh year shall be a sabbath of rest unto the land, a sabbath for the Lord: thou shalt neither sow thy field, nor prune thy vineyard"*.

The expectation of God regarding environmental conservation and preservation is that humanity should adhere to this principle to allow the world to thrive through the ongoing resources and provisions offered by nature. This principle also serves as a regulation against detrimental human activities. As noted by Awuah-Nyamekye, Sarfo-Mensah, Amisah, and Owusu-Bi (2014), threats to the environment primarily stem from human-induced factors such as agriculture, deforestation, and wildfires, which must be addressed. The combination of population growth and land fragmentation poses significant risks to the natural world as we know it. Biblical examples underscore the expectation for us to engage in conserving and preserving our natural resources by participating in planning, decision-making, management, and monitoring of resource quality, thereby assessing whether we fulfill God's directive to act as stewards. Furthermore, Philip and Mukundi (2024) advocate for the empowerment of local initiatives to foster transformative grassroots engagement, promoting sustainable environmental stewardship, particularly in the Awoja area. The aim of Community-Based Conservation (CBC) is to integrate local knowledge, socio-cultural practices, and participatory governance to bolster biodiversity protection while enhancing the socio-economic empowerment of communities (Philip & Mukundi, 2024).

Globally, Community-Based Conservation has seen varying levels of local participation due to numerous factors across different countries. In certain regions, local engagement has been minimal. Kuppusamy (2007) and Kurniawan et al. (2022) noted that community involvement can address many environmental issues, but this is contingent upon empowering individuals to actively participate, allowing for sustainable resource management. The concept of community participation in natural resource development, particularly in water resource management, has evolved; however, past studies indicate that many programs were created and executed without community input, which may explain their lack of success.

The World Bank (2004) defines community participation as a process where stakeholders influence decisions regarding resources that affect them and engage in the management of development initiatives from both external and internal sources. Pal (2021) describes community participation as the active involvement of individuals in preparing for or responding to disasters, emphasizing that genuine participation entails the engagement of affected individuals in analysis, decision-making, planning, and program implementation, along with all activities related to disaster response and recovery without external agency involvement. Additionally, Obot, Afia, and Johnson (2022) characterize a community as a group of individuals, families, and entities united by shared values, characteristics, interests, geography, or social connections, encompassing both the people and their environment. Community participation and empowerment refer to actions, policies, or programs initiated by community members that can influence local health factors and promote healthier communities.

Research has consistently highlighted the advantages of local community participation in catchment management. The most frequently cited benefit is the effective implementation and sustainability of development projects beyond their initial phase. Scholars, including Chambers as referenced by Kinyata and Abiodun (2020), argue that projects involving communities from design through implementation, monitoring, and evaluation are more successful and sustainable than those that bypass community engagement. Chambers' findings are further supported by the World Bank's evaluation of 25 rural irrigation projects worldwide, as discussed by Kamal et al. (2003), which shifted from a top-down approach to a community-led process in project design, implementation, and management. Evaluations conducted six to eight years post-project closure revealed that community-led irrigation structures were better maintained and operated more efficiently, achieving 20% higher crop yields and 35% larger irrigated areas. Projects rated as successful

and satisfactory were those led by the community compared to control projects executed solely by government entities through top-down methodologies (World Bank, 2003).

A 2022 study on the analysis of community participation in project implementation in Rwanda emphasizes the four forms of community participation, which are interlinked, and suggests that none of them should therefore be ignored to achieve the expected outcomes and benefits of community participation. Community involvement, as the first phase of community participation, addresses the aspects of information, capacity building, and preparation to offer sufficient and appropriate support to generate proposals for engagement and action. Control, as the second phase of community participation, involves their organization, implementation, and supervision, which leverages communities' positioning to plan for their well-being.

With these kinds of experiences, the definition of community participation has transformed from a narrower and passive to an active and more participatory connotation by governments and development partners. More studies after this definition seem to also agree that community participation is much more than their mobilization to subsidize labour and locally available raw materials, to their empowerment in making decisions. One such refined definition is by Oakley, who defined community participation as the process by which persons, or development constituents, undertake the obligation for their wellbeing and advance their capability to contribute to their growth and development (Oakley, 1991). All these renewed definitions of community participation point towards the growing interest in participatory approaches towards water resources and catchment management, and restoration.

Forms of Community Participation in Catchment Restoration

"The myth that the affected population is too shocked and helpless to take responsibility for their own survival is suspended by the reality that, on the contrary, many find new strength during an emergency" - Goyet, 1999

Scholars in the field of community participation have suggested numerous forms of engagement, including passive information sharing, decision-making, engagements, consultations, collaborations, and focused empowerment. In their view, McKenzie and Mostafa (2017) argued that all these are focused on promoting an environment where communities are involved in participatory planning, problem solving, achieve democratic values and principles, create inclusivity, and consequently empower communities through their involvement. In the structure of local community participation, Selepe (2023) suggested regular public meetings and formation of community committees as the best mechanisms through which community members participate in their affairs.

Community participation encompasses both theoretical and practical aspects concerning the direct engagement of citizens or citizen action groups that may be impacted by or have an interest in a particular decision or action (Arendt, 1958; Shetunyenga, 2024). It is defined as involving a social group of any size whose members either inhabit a designated locality, often termed a community of place, or share a common heritage or value system, such as a shared cultural identity or political affiliations, referred to as a community of interest. Various researchers, including Stuart (2022) and Ohmer, Mendenhall, Mohr, & Adams (2022), have highlighted the significance of collaboration and engagement within communities as fundamental to the practice of community organization.

Examining the nature of participation reveals both theoretical and practical dimensions, encompassing mobilization, sensitization, provision of materials and labor, and the establishment of committees to oversee restoration efforts; participation manifests in

multiple forms. This section of the literature review draws insights from scholars who have illuminated different types of community participation. Notable contributions from Rollason, Bracken, Hardy, & Large (2018), Sakyi-Darko & Mensah (2020), and Ohmer, Mendenhall, Mohr & Adams (2022) have identified planning, decision-making, mobilization, implementation, evaluation, and direct involvement as key forms of community participation.

Specifically, Sakyi-Darko & Mensah (2020) examined the various forms of community participation by considering what each stakeholder contributes. They argue that in development projects, both agencies and beneficiaries engage as a means to achieve specific objectives. This includes the Agencies aim to address the immediate socioeconomic needs of those affected by the project, often followed by efforts to raise awareness. Conversely, the community must actively engage in the development process and be willing to accept financial tokens or alternative income sources.

Scholars within the health sector have approached community participation through three lenses: passive, active, and transformative (Hove et al., 2022). Passive participation involves merely informing community members about local projects and gathering information without their direct involvement. Here, power to make decisions or provide input is constrained; it is typical of top-down approaches, where external agents lead the process, and the community primarily receives information or services. It is characterized by a lack of active engagement. In contrast, active participation refers to the engagement of community members at all levels, including contributions of labor and local materials, as well as leveraging their skills. Transformative participation focuses on empowering community members to engage in sustainable socioeconomic activities over the long term. Some of these would include, but not be limited to, organizing community members in organized community groups, establishing income-generating programs, and training and skills development. According to Hove et al., in whatever form it takes, projects must take all

necessary steps to encourage community members to fully participate in the development process of their areas. This often results in a win-win situation and, to some extent, guarantees sustainability because they have been enabled to maintain the projects properly. It is imperative to keep in mind all the elements of participation, which include decision making, planning, implementation, mobilization, and evaluation. It is these that result in the participation of community members, which is a pre-requisite for project success.

Factors enabling community participation in catchment restoration

Several studies on the element of factors enabling community participation have pointed out the associated complexities with the process, considering its determinants are influenced by personal and socio-economic circumstances. Hung, Sirakaya & Ingram (2010) earlier suggested an integrative model for the efficacy of community participation. Selepe, (2023) earmarked legislation, enforcement, organized traditional institutions, regular meetings, and formation of committees to respond to diverse community issues. Some scholars have looked at strong leadership, community awareness, a sense of ownership, and the presence of resources and opportunities as aiding community participation (Herdiana, Suwaryo, Deliarnoor, & Rahmatunnisa, 2018). As evidenced here, there seems to be a significant connection between leadership, training, and community participation.

On their part, Howard-Grabman, Miltenburg, Marston, et al., (2017) listed community mobilization, community-based monitoring, and community outreach activities as key in enabling participation. Recently, Breetzke, & Mthimunye, (2025) have acknowledged the facts raised by other scholars but also added issues of inclusivity, material and social resources, opportunities for skills and knowledge as some key forms.

Logically, approaches to enhanced participation in catchment activities would correct all the identified challenges above, albeit some scholars like Alam, (2013); Spray, et al., (2022) have suggested pragmatic guidance to follow. Majorly, they call for understanding

the dynamics of public support as a critical aspect in the successful implementation because the sustainability of sound resource management is rooted in stakeholders' support. Robins, et al., (2025) have also suggested making meaningful engagements, incentivizing involvement, concentrating on inclusivity, and communication.

Chitambo, Smith, & Ehlers, (2002); Mustanir, & Lubis, (2025), unraveled a list that includes responsiveness, embracing interaction, creating meaningful partnerships, creating subgroups, developing targeted outreach strategies, forming trust and transparency platforms, designing a communication avenue that allows feedbacks, encouraging community participation with any medium, and giving meaningful incentives. These strategies to promote local community participation in catchment management and development projects have been ongoing for decades now (Thwala, 2010). As suggested by Akello, Turyahabwe, & Agea (2016), the emphasis is on development agencies and governments integrating specific mechanisms like engaging community members in the design, implementation, monitoring, supervision, and evaluation of the projects. This should contain the specific participation processes, stakeholders' categories to participate, how to participate, and stakeholders ' capacity-building issues so that a productive engagement can be achieved.

As argued by Sakyi-Darko & Mensah (2020), although each implementing agency engaging the community focuses on their best-suited interest, attention must also be on meeting immediate socio-economic deficiencies of the community in question, especially when participation is needed for catchment protection and management.

Hinderances to community participation in catchment restoration

Writing about barriers to community participation in the health sector, Gholipour, Shokri, Yarahmadi, et al. (2023) outlined key challenges, including community trust, status of community participation, and resource limitations. Setokoe, & Ramukumba, (2020), writing about barriers to community participation in tourism, identified several challenges

including elitism, factions, greed and corruption, leadership conflict, language, and lack of capacity to participate in development initiatives, lack of support from government, as well as lack of funding. Other scholars like Bos, & Brown, (2015); Odoom, (2020) have outlined a myriad of challenges to participation to include resource limitations, systemic barriers, and power dynamics within communities. These challenges often hinder communities from fully engaging in initiatives aimed at improving their well-being. The list for barriers to community participation also includes; Lack of funding, poor infrastructure, ample time, lack of access of information or deliberately withholding information, feeble community capacity, inequalities, governance issues, weak policies, biased implementation, corruption (lack of transparency), and fear of conflicts (Mishra et al., 2022). Each of these challenges is critical and must be looked at as a whole if the project is going to succeed. Looking at how important each is:

Lack of Trust. Such a lack of trust creates a significant barrier to effective community involvement in catchment restoration, undermines self-confidence in other institutions, hinders collaboration, and encourages social fragmentation. According to Bos and Brown (2015), trust can be built through a progressive and adaptive process of participation that is important in effectively mobilizing communities in catchment-level restoration programs, as demonstrated in the Little Stringybark Creek case in Australia. Similarly, Shunglu et al. (2021) argue that socio-political fragmentation, elite capture, and hierarchical social relations erode trust, hence creating token participation which hinders restoration in the directions of equity and inclusion. These scholars argue that if trust-building and the redress of power dynamics are not intentionally pursued, restorative efforts will not naturally involve communities in a meaningful way.

Poor Infrastructure. Poor infrastructure has prevented participation of communities in catchment restoration in practical, logistical, and socio-economic senses by restricting

access to, participation in, and progression of restoration activities. For example, the Little Stringybark Creek project undertaken in Australia showed that although private stormwater infrastructure was sub-optimal, a significant barrier to local residents implementing water sensitive design was not their motivation, but inadequate stormwater infrastructure on private land (Bos and Brown, 2015). They argue that simplification of the application and mobilisation processes and addressing infrastructural constraints were key entry points for community participation. Similarly, Shunglu et al. (2022) highlight that poor infrastructure reinforces exclusion and limits the potential of participatory water governance, in particular in marginal and far-reaching parts. They warn that without addressing structural deficiencies such as poor roads or bad communication networks, rehabilitation efforts will remain unachievable or unsustainable for many local people.

Lack of Resources. A key limitation blocking active community participation in the restoration of catchments is resource scarcity, which stops stakeholders from being efficiently involved in the restoration process. According to Bernhardt and Palmer (2007), many of these programmes do not live up to their aspiration because they do not invest enough in constructing the human resources and supporting systems capacity of the society in the long term. Likewise plausible, according to Lundy and Wade (2011), is the limitation of adequate financial and technical resources, which restricts the adoption of sustainable water management in rural and peri-urban areas. Green et al. (2012) also underscore that successful catchment restoration should involve more than just planning for the ecology of the landscape; it should structure the availability of the resources and knowledge necessary for communities to actively participate. Together, these scholars emphasize that resource limitations must be overcome to facilitate meaningful and inclusive community involvement in restoration.

Lack of information. With little information comes little awareness and understanding, and the chance for individuals to be a part of decisions that affect their lives. Shields et al (2021) argue that dynamic and meaningful community engagement necessitates deliberate and inclusive communication approaches that can accommodate diversity and inescapable inequalities across rural communities. They also point out that many rural water restoration projects lack community participation. This, in turn, is the product of a lack of information, poor transparency, and lies. Yocom (2014) highlights the way in which the restoration work must reflect on the policy environment in the sociocultural context and not be simply transplanted or imported broadly. The communities should not be recipients of information, but to have the decision-making power to do something with the information. Where information is lacking, this frequently leads to disengagement and distrust. Walker (2011: 253) also shares the same view: only communities that have a full understanding and knowledge of the ecological and social implications of their intervention can become active agents of the environmental restoration effort. These authors emphasize that "education, participatory planning and transparent exchange of knowledge are privileged instruments for the future". Reducing gaps in information is key to the sustainability of real community involvement in working to restore catchments.

Corruption. Dishonesty only benefits a few individuals at the expense of the project, community, and nation. Corruption undermines trust, leads to poor allocation of resources, and allows the influential, powerful, and dominant stakeholders to hijack environmental programs, so that those who still would like to participate in catchment restoration are put off from doing so. Shunglu et al. (2022) note failures in the implementation of participatory water governance initiatives that are not sensitive to power relations. Local elites then go on to appropriate local resources for self-enrichment in return for giving token participation. In this case, though, these elites consume most of the benefits and suffocate democracy.

Corruption limits a bigger circle of the population from being involved. Along the same vein, Kinyata and Abiodun (2020), as cited by Tacconi, Luca & Williams, Aled. (2020), in their environmental review, explain that in Africa, so many development projects were not successful due to corruption, and also because local communities were not involved in planning and implementation processes. They emphasize that without transparency and meaningful community involvement, efforts to repair ecological integrity are likely to either be short-lived or just not work. In such approaches, these scholars argue that as a first step to allowing more people to participate in restoration projects, we have to put in place Checks on corrupt officials and improve governance in a manageable manner for all involved so that everyone can have a Voice and participate.

Implementation Bias. This refers to unreasonable, inequitable distribution of resources. It creates conflict, dislike, and unending conflict. Implementation bias often deters participatory patterns in local catchment restoration and gives priority to institutional practices. Freudenberg et al. (2010) took it further, showing that environmental decision-making processes were frequently marked by systematic types of biases. These ostracized, low-income, and non-dominant communities of all sorts by misleading language, poor advertisements, and planning systems that were themselves exclusionary. What their bias produced was that people in these communities were represented, or engaged symbolically or ritually, only in the decision-making, but really had no control over any of it. Consistent with this approach, Allan & Curtis (2012) argue that sustainable catchment management requires flexibility in governance approaches to suit local conditions. Existing implementation models, they note, tend to be hierarchical in structure and to rely on top-down storytelling, which can marginalize the communities and undercut the future of restoration. Instead, the authors propose more flexible, inclusive, and locally responsive models of implementation

that can restore to at least some degree the ecological integrity of the environment and not humiliate the communities impacted.

Elitism. This is a situation or system in society where the learned are dominant, superior, and most time entitled. It is a societal disease that disrespects or overlooks community members. Catchment restoration and elitism may be obstructed by a few "leading" (political, economic, or social) forces. They hold the power, they have the resources, and they influence the outcomes of services to serve their self-interest. This is widely referred to as elite capture. This violates the logic of participatory governance that promotes the inclusion of all stakeholders in decision-making. A study on an upper catchment area in Kenya's Mara Basin, which examined Water Resources Users Associations (WRUAs) (Richards and Syallow 2018), found that elite capture was a significant challenge to effective community engagement. They noted that even though WRUAs were intended to encourage decentralized and participatory natural resource governance, in practice local brokers (often consisting of "big men") entrenched themselves as leaders and decision makers, excluding marginalized community members and distorting the process of the equal distribution of benefits. So too critical literature on community-based natural resource management points out that elitism may result in a procedural type of exclusion, such that participation is more ritual than real. The consequence is restoration efforts that are not locally legitimate and do not attain the full array of needs and knowledge of the local population.

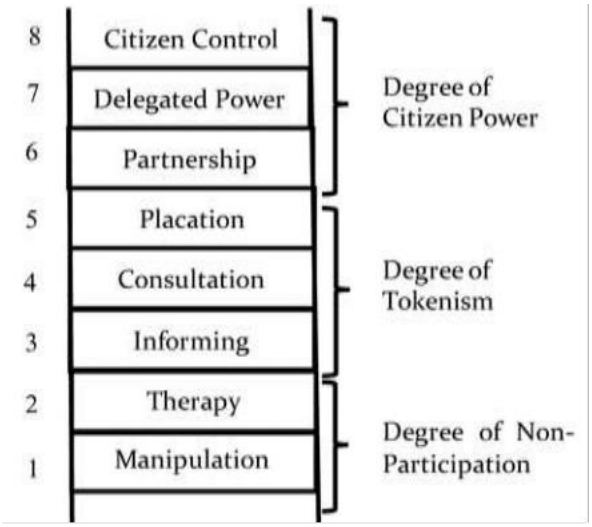
Characterization of the Level of community participation in catchment restoration

Having examined the types and characteristics of community involvement, it is essential to investigate the degree of this participation. The discussion delves into the extent of engagement that enhances project initiatives and evaluations. As noted by Kusmiarto, Sutanta, & Aditya (2020), there is a lack of comprehensive studies detailing the level of community participation in catchment restoration efforts in Uganda. This study identifies that

gap. To address this, Kusmiarto, Sutanta, & Aditya (2020) employed Davidson's (1998) Wheel of Participation and Arnstein's (1969) Ladder of Citizen Participation to illustrate the degrees of community involvement. The Ladder, illustrated in Figure 1, indicates that the level of citizen engagement is contingent upon their power, which must be shared and distributed. The Ladder outlines eight levels of public participation, categorized into three main scales: Non-Participation, Tokenism, and Citizen Power.

Figure 1

Eight Steps on a Ladder of Citizen Participation



Note: From "A Ladder Of Citizen Participation", by S.R. Arnstein, online journal, p.55 (https://doi.org/10.1080/01944366908977225). Copyright 2007 by the Journal of the American Institute of Planners.

Centered on Figure 1, the level of non-participation is on the first and second steps, namely, manipulation and therapy. These two steps illustrate the level of "non-participation"that some people have made to replace actual participation. Their real purpose is not to allow people to participate in the planning or carrying out of programs, but to enable the power

holders to "educate" or "cure" the citizens. This is equivalent to the Passive form of participation discussed earlier in this chapter. The level of Tokenism is on the Informing, Consultation, and Appeasement steps. When citizens are offered full participation, they may

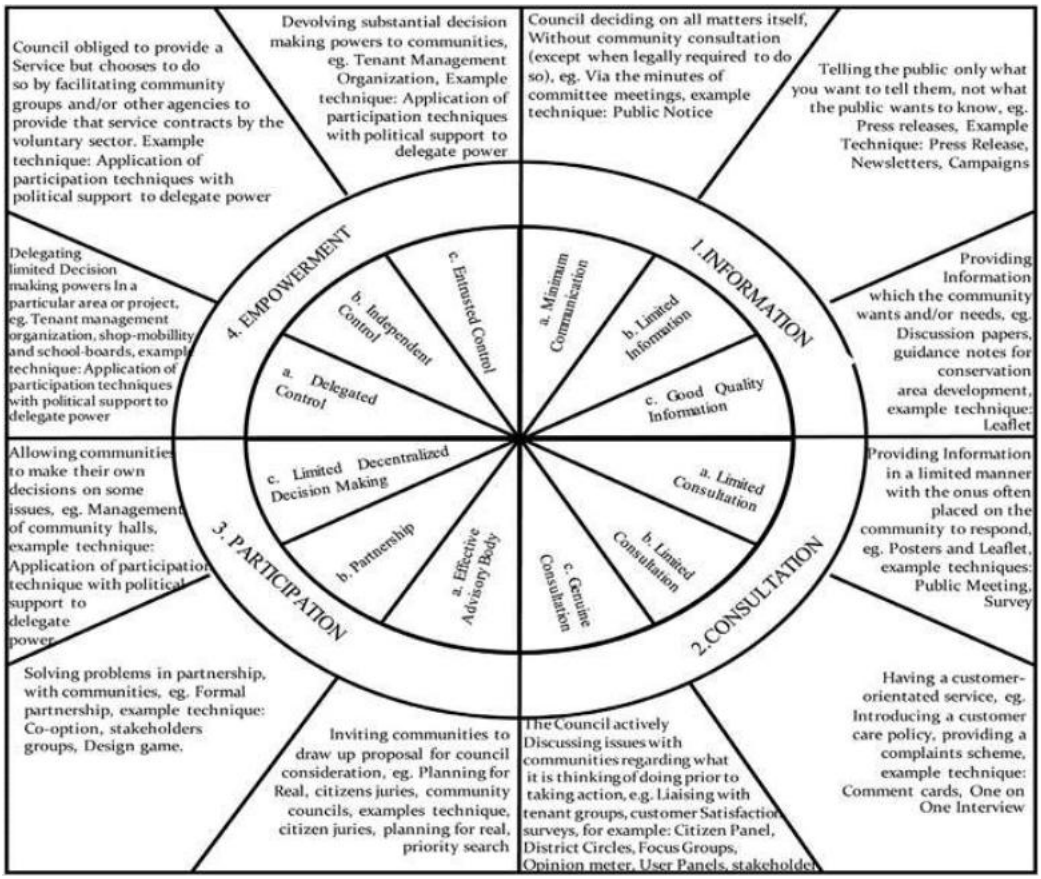
indeed hear and express their opinions. Still, in this condition, they do not have the power to ensure that their views and ideas will be followed up by those in power. The level of power of the citizens is in the sixth, seventh, and eighth steps, specifically Partnership, Delegated Power, and Citizens' Control. At this level, citizens can be involved in "Partnerships," which allow them to negotiate with power holders. On the top step, "Power Delegation" and "Citizen Control," citizens with a majority of seats can make decisions or have full managerial power (Kusmiarto, Sutanta, & Aditya, 2020, pp. 47- 49).

The Wheel of Participation: Davidson (1998) proposed this model, defining a decision that involves community participation as a quadrant on the project wheel. The right strategy is chosen according to the direction of the wheel's clock rotation. The wheel will only rotate well as a model if this decision is taken collaboratively. If not, the project can be considered informational only, and a limited approach will be chosen. Variations in communication categories and participation processes are described in four quadrants on the wheels, according to Figure 2. It shows 4 (four) Wheel of Participation quadrants (Davidson, 1998) with a few modifications. Each quadrant is divided into 3(three) stages (a, b, c). The provision of this code aims to simplify the categorization of the participation level and facilitate the analysis of the participation level in the object being studied.

Taking quadrant 1 as an example, (Information) consists of a: Minimal communication; b: Limited information; c: Good quality information. If an activity is categorized as 1c, the level of participation is useful quality information. Another example in quadrant 3 (Empowerment) consists of a) Delegated controls, b) Independent control, and c) Reliable control. If an activity is categorized as 3a, it means that the level of participation is at the level of empowerment with delegated control.

Figure 2

The Wheel of Participation



Note: Source: Modification from (Davidson, 1998)

Strategies to improve local community participation in catchment restoration

Logically, approaches to improved participation in catchment activities would correct all the identified challenges above, albeit some scholars like Alam, (2013); Spray, et al., (2022) have suggested practical guidance to follow. Majorly, they call for understanding the dynamics of public support as a critical aspect in the successful implementation because the sustainability of sound resource management is rooted in stakeholders' support. Robins, et al., (2025) have also suggested making meaningful engagements, incentivizing involvement, and concentrating on inclusivity and communication.

Chitambo, Smith, & Ehlers, (2002); Mustanir, & Lubis, (2025), unraveled a list that includes responsiveness, embracing interaction, creating meaningful partnerships, creating

subgroups, developing targeted outreach strategies, forming trust and transparency platforms, designing a communication pathway that allows feedbacks, encouraging community participation with any medium, and giving meaningful incentives. These strategies to promote local community participation in catchment management and development projects have been ongoing for decades now (Thwala, 2010). As suggested by Akello, Turyahabwe, & Agea (2016), the emphasis is on development agencies and governments integrating specific mechanisms like engaging community members in the design, implementation, monitoring, supervision, and evaluation of the projects. This should contain the specific participation processes, stakeholders' categories to participate, how to participate, and stakeholders ' capacity-building issues so that a productive engagement can be achieved.

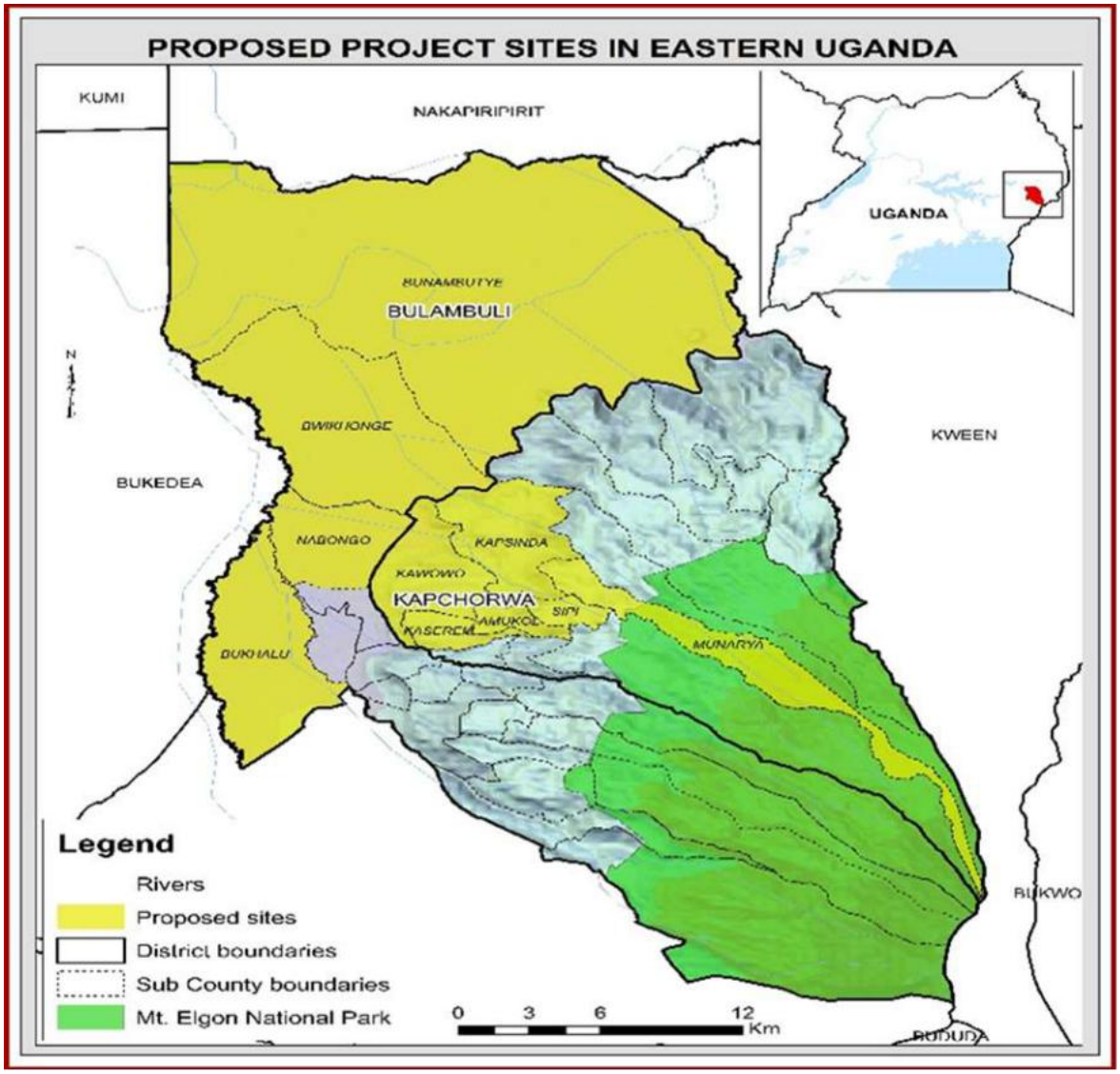
Conclusion

There is sufficient evidence presented by several scholars that local community participation in development projects in general, and water resources management in specific, is a topic of concern that requires attention in a consolidated and holistic manner. The authors highlight the positive transformation in the international and national legal and policy frameworks that provide for participatory community engagement in water resources and catchment management. However, the gap in the studies undertaken in Uganda about local community participation in catchment restoration still exists. This is mainly in the areas of the extent of local community participation and practical strategies that can be applied to improve the level of local community participation in catchment restoration. This research will therefore contribute to the already existing knowledge base on how to improve the level of community participation in catchment restoration and management in Uganda at large.

The following map shows the location of the project site for catchment restoration projects in Uganda related to this research.

Figure 3

Map of Sites for the Catchment Restoration Project in Awoja in Eastern Uganda



Chapter Three: Methodology

Sources of Relevant Data

I used a mixed methods research design, where I utilized both qualitative and quantitative approaches to collect data using survey questionnaires, focus group discussions, and documentary review and analysis. I identified respondents who were well able to provide relevant information that was required for the study under the following categories:

The contracts management team from the Ministry of Water and Environment was chosen because they provided managerial and oversight roles to the implementation of the project in Awoja catchment, Kyoga Water Management Zone, in Eastern Uganda. They were better placed to provide information on the overall project management and policy-related aspects of the project.

The Awoja Catchment and Sipi Sub Catchment Management Committee members were selected because they were responsible for the regular monitoring and supervision of the implementation of the project at the catchment and Sub catchment level. They knew how the project was implemented and shared their views and perspectives on how to improve local community participation in catchment restoration.

The district level project focal from Kapchorwa district local government and the Sub County project focals from Sipi and Munarya Sub Counties were selected because they supported the coordination of the district and Sub County level project stakeholders on daily basis through mobilization, supervision, monitoring and reporting. They were also selected because they had knowledge and experience in the project implementation, and they shared their views on how the local community participated in catchment restoration, the extent of local community participation and proposed strategies to improve participation.

The Hotspot committee members, who were part of the smallholder farmers were selected because they were appointed as the immediate community volunteers to support their

fellow farmers in the day-to-day mobilization and implementation of the project in their locality in the villages. They shared their views and experiences on how the local community participated, how they perceived were the factors that enabled and hindered their participation in catchment restoration, how their level of participation in catchment restoration was characterised, and how community participation could be improved.

The smallholder farmers were the direct project beneficiaries and at the core of this research. They were selected because they owned the greater percentage of the land where catchment restoration was done and they provided their experiences and opinions about how they participated in restoration activities, how they perceived were the factors that enabled and hindered their participation in restoration, how their level of participation was characterised, and how community participation could be improved.

The Subcatchment and microcatchment management committees are comprised of government employees and representatives of the non-state actors. These are catchment based management organisations established under the Catchment Management Guidelines of the Ministry of Water and Environment developed and approved in 2013, and the Catchment Management Organisatios Procedures manual, 2019, which promote coordination and integrated planning among stakeholders in the catchment. They provided their views and experiences on how the local community participated in catchment restoration, how the level of community participation in restoration was characterised, and how community participation in catchment restoration could be improved.

The project implementing and supervising partners were selected. Specifically, the staff of the implementing service contractor, AidEnvironment was represented by the Team Leader, Soil and Water Conservation Specialist, Forestry expert, and Livelihood expert. They were selected because they were directly involved in the facilitation of restoration activities on the ground and provided relevant information on how the community participated in

restoration activities, how the community perceived were the factors that enabled and hindered their participation, how the level of community participation in restoration was characterised and how community participation could be improved. The technical experts namely, the Soil and Water Conservation expert, the forest expert and the Team Leader from the International Union for Conservation of Nature who were the supervising consultants were selected because they had relevant information from their supervision perspective on how the local community was involved. They provided their opinion on how the local community participated in restoration, how the level of community participation in restoration was characterised and made suggestions on how to improve community participation in catchment restoration. Appendix A.1 shows a table of those who made up the participants either as survey respondents, focus group respondents and interview respondents.

Data Collection Methods

This research was conducted through fieldwork in Kawowo, Munarya and Sipi Sub Counties, in Kapchorwa district located in Awoja catchment, Kyoga Water Management Zone in Eastern Uganda. Kawowo Sub County is comprised of two parishes, namely, Sanzara and Kongowo, and eleven villages while Munarya Sub County consists of four parishes namely Ngasire, Kamengong, Kapkwateny, and Chebonet, and eighteen villages and Sipi Sub County consists of three parishes, namely, Chepterit, Gamatui, and Kapkwirwok, and twelve villages.

The study area was purposively selected because they were the sites where the Community Demand Driven Catchment Restoration and Management project implemented by the government of Uganda through the Ministry of Water and Environment was piloted and implemented.

Survey Questionnaires

I used survey questionnaires to collect quantitative data that described the characteristics, opinions, and attitudes of smallholder farmers and hotspot committees who were the direct project beneficiaries. The survey questionnaires contained standardized close-ended questions that were administered orally among smallholder farmers because most of them were illiterate. I issued self-administered survey questionnaires among the micro catchment management committees. I used survey questionnaires for these categories of respondents to save on time and the cost that was involved in collecting large amounts of information. Given that the questionnaire allowed for anonymity, it encouraged openness in responding to the questions and therefore, increased the reliability of the information generated. The responses from the questionnaires enabled me to gain greater insights into the opinions, beliefs, and attitudes of the respondents. See Appendix B for the Survey Questionnaires.

Interviews

I administered personal interviews among the contracts manager, and Senior Sociologist from the Ministry of Water and Environment, the Team Leader of the service contractor, the Team Leader of the supervising consultant, the district and Subcounty level project focal points, the Chairpersons of the Sub catchment and micro catchment management committees, Grievance Redress Committees, Soil and Water Conservation Specialist, Forestry expert, and Livelihood expert from AidEnvironment and the Team Leader, Soil and Water Conservation specialist and the forest expert from the International Union for Conservation of Nature, the supervising consultant. I used the one-to-one personal interviews to clarify ambiguous responses to specific questions as well as obtained in-depth explanations and information through follow-up questions and probes, as this method allowed the respondents to use their own words and expressions to respond to the questions. The interview guide consisted of open-ended questions that allowed for detailed accounts of the

views and opinions of the respondents. Through probing, I was able to gain a lot more valuable insights as the respondents clarified the issues through the follow-up questions. I also realized that my presence with the respondents encouraged their participation, and I was able to complete the interviews within the scheduled time. See Appendix C for the Key Informant Interview Guide and questions.

I held Focus Group Discussions with the Hotspot committee members and the micro catchment management committee members to allow for more data collection which might have been captured by other methods like the interviews and the questionnaires. I selected this method because it made it easier to interact with the project beneficiaries who were illiterate. They participated freely and expanded their opinions in an unrestricted way through the use of their own words. I used the detailed responses from the respondents to obtain additional information which was used to validate data collected through the other methods. Three focus group discussions were held with eight respondents in each group. See Appendix D for the Focus Group Discussion Guide and questions.

Document Analysis

I reviewed and analyzed existing project proposal documents and annual reports to obtain qualitative secondary data. The document analysis from the documents enabled me to confirm and validate some of the findings that were revealed through other methods to gain the views and opinions of the different categories of respondents.

Sampling Strategies

I employed purposive and simple random sampling methods to select the study population. Simple random sampling was used to select the parishes and villages under study. I applied the lottery method, where I assigned unique numbers to all the parishes and the villages and wrote them on separate pieces of paper that were of the same size, shape, and color. Each paper was folded and mixed well in a container to have an equal chance of being

selected. I then drew out 5 pieces of paper to form the desired sample size of 5 parishes. The same procedure was repeated to draw the sample size of 20 villages out of the 41 villages.

I selected 345 respondents to answer the survey questionnaires. Out of the 345 respondents, 276 smallholder farmers , 26 were Hotspot committee members, 26 were chairpersons of the farmer groups and 10 were LC1 chairpersons who were randomly selected to participate through an oral survey, while data was collected among 7 respondents through self-administered survey questionnaires who were the micro catchment management committee members.

I selected 24 key informants through purposive sampling because of their extensive knowledge and experience, and they provided significant information on the topic under study. The respondents included the contracts manager, and Senior Sociologist from the Ministry of Water and Environment, the Team Leader of the service contractor, the Team Leader of the supervising consultant, the district and Subcounty level project focal points, the district Agriculture Officer, Community Development Officer, Production Officer, the Subcounty Agriculture extension officers, and Community Development Officers, the Chairpersons of the Sub catchment and micro catchment management committees, Grievance Redress Committee members, Soil and Water Conservation Specialist, Forestry expert, and Livelihood expert from AidEnvironment and the Team Leader, Soil and Water Conservation specialist and the forest expert from the International Union for Conservation of Nature, the supervising consultant.

I selected 24 respondents in the categories of hotspot committee members and micro catchment management committee members using purposive sampling to collect data in three focus group discussions. The respondents were however selected randomly through the lottery method to give them an equal chance of participation in the group discussions to gather additional in-depth information to validate the data that I had collected through the

oral survey questionnaires and the personal interviews. Details of the breakdown of the respondents are presented in Table 1.

Table 1

Respondents and Method of Inquiry

S/no	Method	Category of respondents	Population Size	Sample size	Sampling method
1	Oral survey questionnaire	Community members: Smallholder farmers	3400	276	Simple random
		Community Group Leaders: Hotspot Committee members		26	Simple random
		Community Group Leaders: Chairpersons of the farmers' groups		26	Simple random
		Local Leaders: LC 1 Chairpersons		10	Simple random
	Self-administered questionnaire	Local leaders: Micro-catchment management committees		7	Simple random
		Total	**3400**	**345**	
2	Personal Interview	Project staff from the Ministry of Water and Environment	5	2	Purposive
		District project focal	1	1	Purposive
		Kapchorwa district local government Technical officers	5	3	Purposive
		Sub County project focals	3	3	Purposive
		Sub-County technical officers	9	4	Purposive
		Team Leader– Service Provider	1	1	Purposive
		Team Leader– Supervising Consultant	1	1	Purposive
		Chairperson–Sub-catchment Management Committee	1	1	Purposive
		Chairperson– Micro-catchment management committee	1	1	Purposive
		Service Provider's Field technical staff	5	2	Purposive
		Consultant's Field technical staff	5	2	Purposive
		Grievance Redress Committee members	15	3	Purposive
			48	**24**	
3	**Focus Group Discussions**	Hotspot committees	24	12	Simple random
		Micro-catchment management committees	25	12	Simple random
			48	**24**	
		Total	**3,496**	**393**	

Ethical Considerations

Before undertaking the study, an introductory letter was obtained from the Team Leader of Kyoga Water Management Zone of the Ministry of Water and Environment to introduce me, as the researcher to the district and sub-county authorities in the study area, the service providers, project management, and governance focal points. The introductory letter helped me gain access to the relevant project documents for analysis from the Ministry's resource center.

Based on the fact that this research focused on people, the major ethical consideration was the privacy and confidentiality of the respondents. As a starting point, I protected the identity of the respondents by provision of identity codes and numbersto the respondents and their geographical location on the survey questionnaires, instead of use of their names. I informed them about the purpose of the study and also made them understand that their participation was purely voluntary. All the respondents were enrolled after obtaining their informed consent to participate in the study.

At the stage of administration of the research instruments, I introduced and explained the purpose of the study to the respondents and assured them of their confidentiality protection with an emphasis on anonymity as they filled in the questionnaire. For the respondents who participated in interviews, I sought permission from them to use their titles only, for tracking and coding the responses. Lastly, I made sure I exhibited trustworthiness and safe custody of the research instruments after data collection and during report writing, to ensure that access by external persons was safeguarded.

Research Bias, Data Validity, Reliability, and Credibility

Minimizing Research Bias

There were biases that I was likely to bring into the study as a researcher, who works for a nature conservation Non-Governmental Organization with a strong focus on policy advocacy in the Environment and Natural Resources sector. The first set of biases that were likely to occur was particularly in the choice of the research methods that I had planned to use, how I had planned to ask the research questions and other cultural factors such as the dress code to adopt during data collection. I factored these possibilities into consideration to minimize the biases in the following ways. I carefully selected the words that I used in the development of the research instruments. For instance, I made sure that I used simple and clear language to introduce the purpose of the study and the survey questions. Before the actual survey, I pretested the research instruments with twenty respondents to identify existing ambiguities and lack of clarity in the questions. I received immense feedback which helped me to re-state some questions and statements, while I had to completely delete some of the questions that were misleading, vague, and not understood by the respondents. I also trained three research assistants who were teachers by profesion in the Awoja catchment and had attained their first degrees. They were locals and fluent in the local language, "Kupsabiny." I provided them with training for one day, split into two sessions to observe the principles, protocols, and question-asking and probing techniques during data collection through the survey questionnaires.

Data Validity, Reliability and Credibility

To ensure the validity, reliability, and credibility of the data that I collected, I used mixed methods including both qualitative and quantitative methods to undertake the study. For instance, I used simple random sampling to offer equal and distinct opportunities for respondents to be included in the study and therefore minimized the bias on the study results.

The use of both the qualitative and quantitative methods also enabled me to validate similar data that I had collected through the different methods. I made an effort to share the

research findings with a few of the respondents for their review and feedback, particularly the project contract manager, the Team Leader service contractor, the Team Leader supervising contractor and the district project focal points to further validate the analysis and interpretation of the results.

Pretesting the Survey Instruments

The pretesting of survey instruments was quite an experience for new learning and discoveries for me in conducting action research. The survey instruments that I developed and pretested in preparation for the research were the survey questionnaire, Key Informant Interview guide, Focus Group Discussion Guide, and Document analysis checklist. I administered Survey questionnaires to eleven respondents and Interview Guides to four respondents, while I conducted one focus group discussion with five respondents.

I pretested the instruments to check out the relevance of the questions to the central research questions and the subsidiary insight questions, checked clarity in the questions developed to establish if all the terms and concepts were well understood, checked the logical flow of the questions, the length of the instruments to establish the maximum time it could take to administer each instrument, checked ambiguity and technical use of words, checked clarity in the introduction to establish if it was well understood enough for the respondents to grant consent to participate in the survey.

The respondents I selected for the pretest included samples from at least the targeted audience for my study. For instance, I selected ten smallholder farmers for the survey questionnaires, the District Environment Officer, the Subcounty Community Development Officer, the Forest Officer from the Service contractor, a Grievance committee member, and Subcounty project focal for the Interview Guides and five hotspot committee members for the Focus Group Discussion Guide. I distributed the document analysis checklist to the Senior Water Officer, the Civil Engineer, and the Seior Sociologist who were experts from the

project contract management team from the Ministry of Water and Environment to provide their feedback.

I made some changes to the survey instruments in response to the feedback received. These included the reduction in the length of the survey questionnaire and the elimination of redundant questions. The number of questions in the Key Informant Interview Guide was reduced to address concerns about repetition and duration. The document analysis checklist was refined to include essential documents like the Stakeholder Engagement Plan and Communications Strategy, the Catchment Management Guideines 2014, The Catchment Management Organisations Procedures Manual 2019, and the World Bank Environmental and Social Framework 2018, for investment project financing.

Chapter Four: Findings and Discussions

Introduction

This chapter presents the findings of the study which was conducted on local community participation in catchment restoration in Awoja Catchment, Kyoga Water Management Zone in Eastern Uganda. The findings and discussions are presented according to the subsidicary insight questions.

Coding and Analysis

On completion of the data gathering process, I embarked on data compilation and analysis. In data compilation, I focused on data coding. The first step that I took in data coding was data preparation and cleaning. Whereas the process of data cleaning was done during the data gathering process, I did a second round of cleaning to check that the questionnaires were all completed, and that no typo errors existed, which would otherwise affect the meaning of the responses.

The second step I took was to read through the basic data from the questionnaires, interviews, and focus group discussions, which provide the fieldwork setting of the study such as location in terms of Sub Counties, Parishes, villages, and the context in terms of respondents' characteristics or demographics such as gender, age, marital status, and education level.

With a copy of my research questions at hand to keep focus and track, I read through all the answers to the open-ended questions to have a general overview of the data, understand the emerging themes, and decide what additional initial codes to use. Before I started data collection, I had developed a set of a few pre-established codes and their definition from my literature review. I took a further step to read through the open-ended answers line by line, to dig deeper, refine the codes, and assign additional codes where it was

necessary. For instance, at the stage of line-by-line review, I decided to split some codes while I also merged some codes at the end of the review.

The third step I took was to create a code book to present the list of the codes and subcodes assigned to the data sets, their descriptions, and samples of the most insightful quotes from the respondents. I decided to use the Excel spreadsheet to organize and compile research data to create a data set. I preferred to use the Excel spreadsheet because it allows for easy organization of large amounts of data, making it easier to enter, sort, and analyze large datasets. Excel has built-in functions such as validation and error checking features, and formulas that can help to perform calculations and statistical analysis of data. Relatedly, it allows for the easy creation of visual representation of data such as graphs and charts, which can help in interpreting and presenting research findings. However, I found the process of developing subcodes quite time-consuming, which took several days to complete.

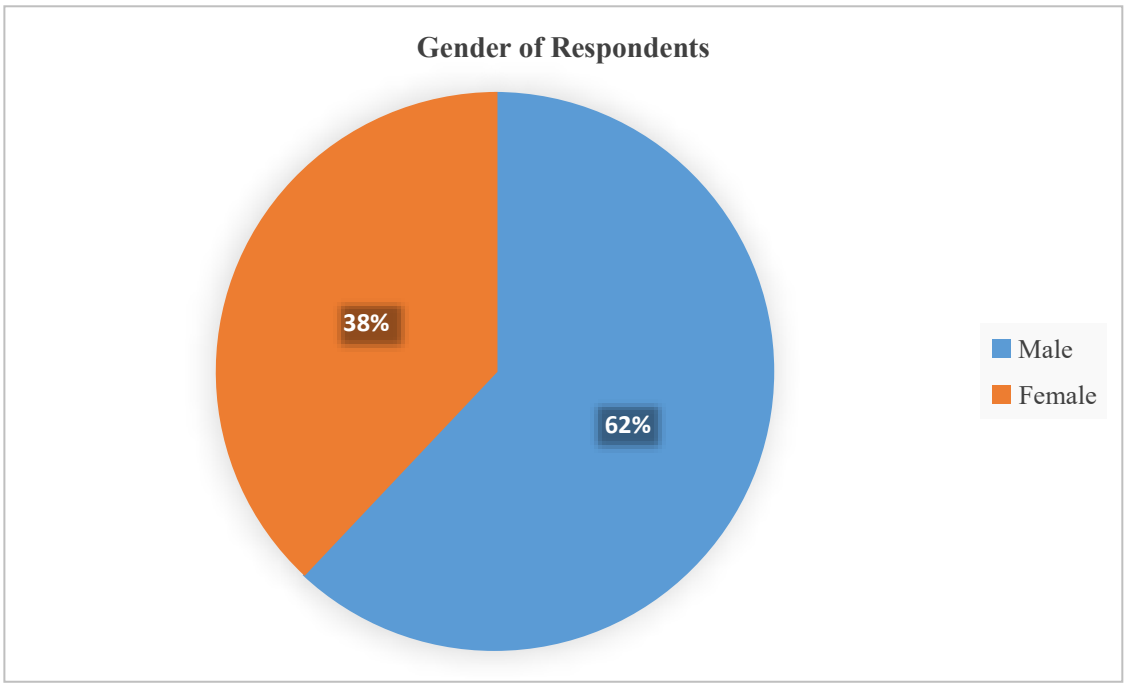
In data analysis, I focused on making sense of the data that I had collected to establish what exactly it could mean. Specifically, I attempted to make sense of the kind of respondents in my samples that I had hoped to reach, whether there were clear patterns in the responses to the specific aspects I was investigating in each of the subsidiary and central research questions, and whether the responses could point me to some clear conclusions about my research topic. I created tables, frequencies, and proportions in percentages, mainly for closed-ended questions to establish how the responses were addressing my central research question and what it meant overall, while I created a pie chart and graphs to visualize the data from both closed and open-ended questions for further interpretation. I carried out triangulation through the responses from the survey questions, personal interviews, and Focus Group Discussions to validate if the findings were consistent and concrete enough for me to confidently state my conclusions to the subsidiary research questions and the central research question. Lastly, I conducted cross tabulation to understand

if there was a relationship between some variables like categories of employment and the level of employment experience, and to understand why such relationships exist.

Insights from the Demographics

Figure 4

Gender of Respondents



Source: SQ2, N=345, IQ1, N=24, FGD1, N=24 ; TN=393

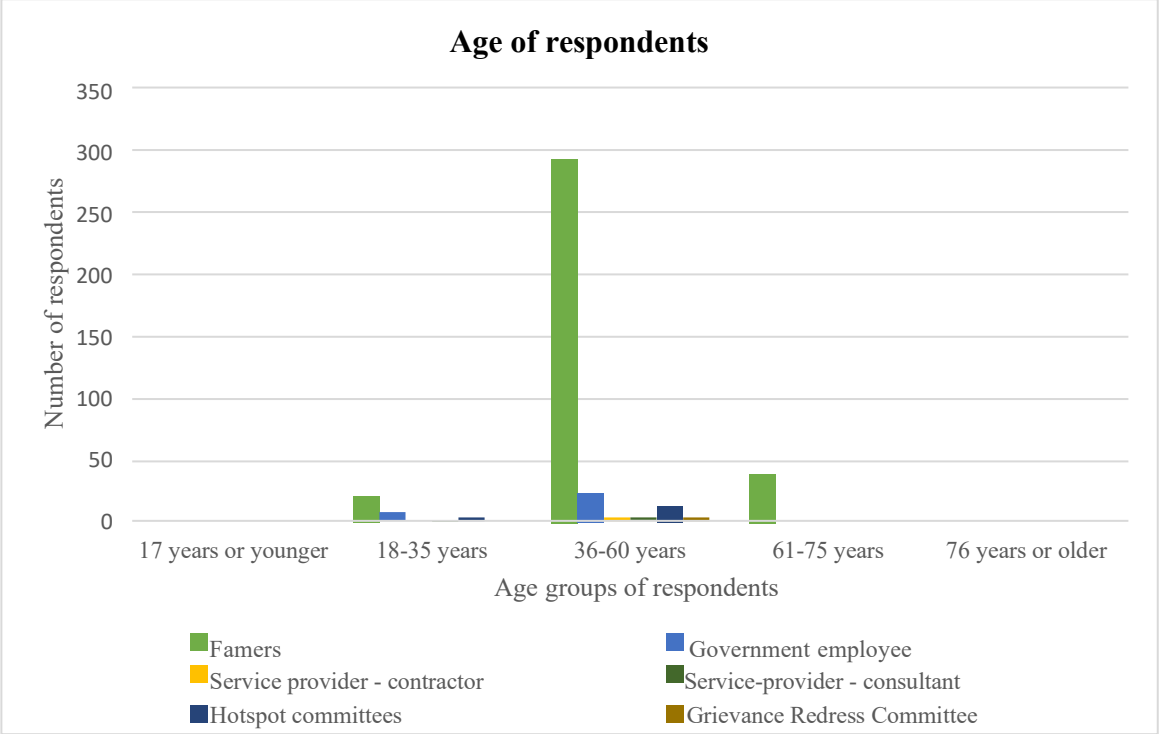
(See Appendix A.2)

S = Survey, I = Interview, Q = Question, GD = Focus Group Discussion, T = Total, N = Number

Findings from the demographic data in Figure 4 indicate that 62% of the respondents are male and 38% of females participate in catchment restoration.

Figure 5

Age of Respondents



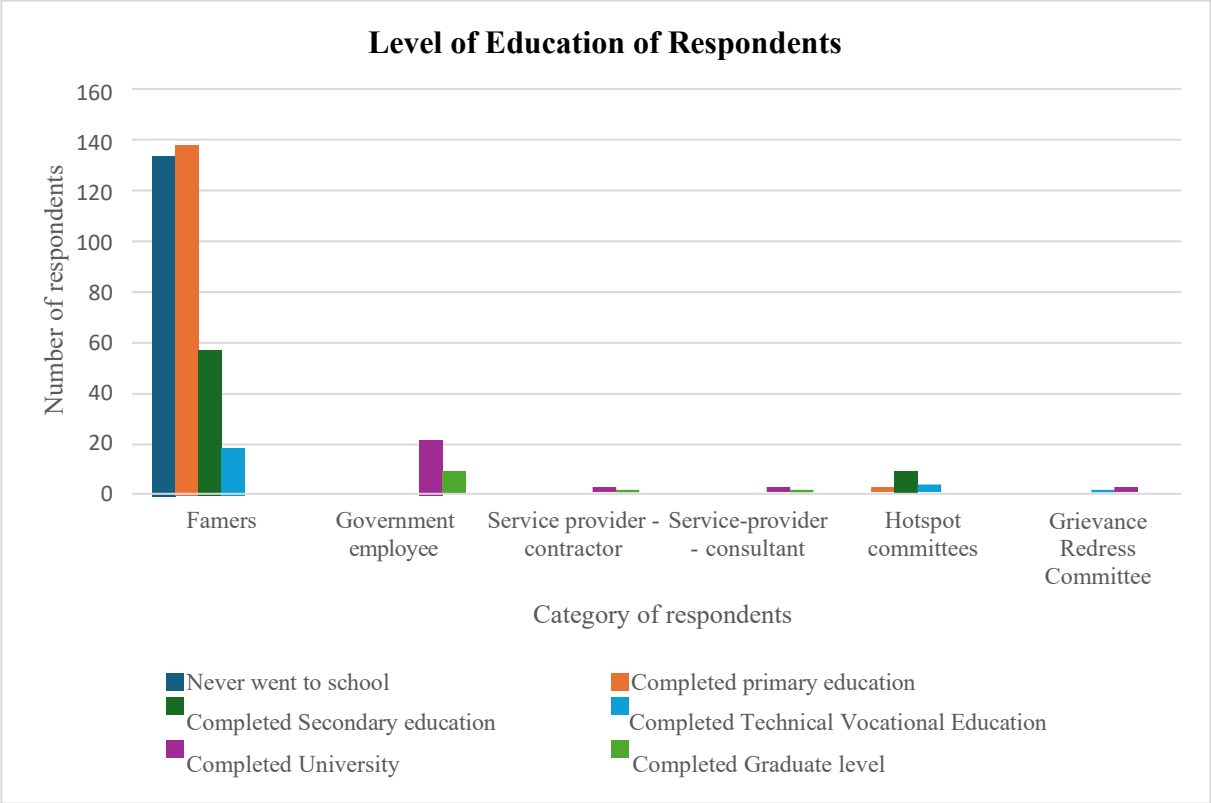
Source : SQ, N=345, IQ2, N=24, FGD1(b), N=24 ; TN=393

(See Appendix A.3)

In Figure 5, the category of respondents reached were farmers, government employees, Service provider– contractor, Service provider-consultant, hotspot committees and Grievance Redress Committee. 292 out of the 393 respondents were aged between 36 to 60 years, the rest were aged between 18 to 35 years and 61-75 years. This finding shows that the majority of those engaged in catchment restoration were adults, with few youth, who are considered to be the contributors to both the degradation and restoration of the catchment. This insight reveals the gap in representation of the different age categories of the local community in catchment restoration. This information could be used to identify the strategies that can be employed to engage the men, women, and youth to participate in catchment restoration equally.

Figure 6

Education Level of Respondents



Source : SQ5, N=345 ; IQ4, N=24, FGD1(c), N=24 ; TN=393

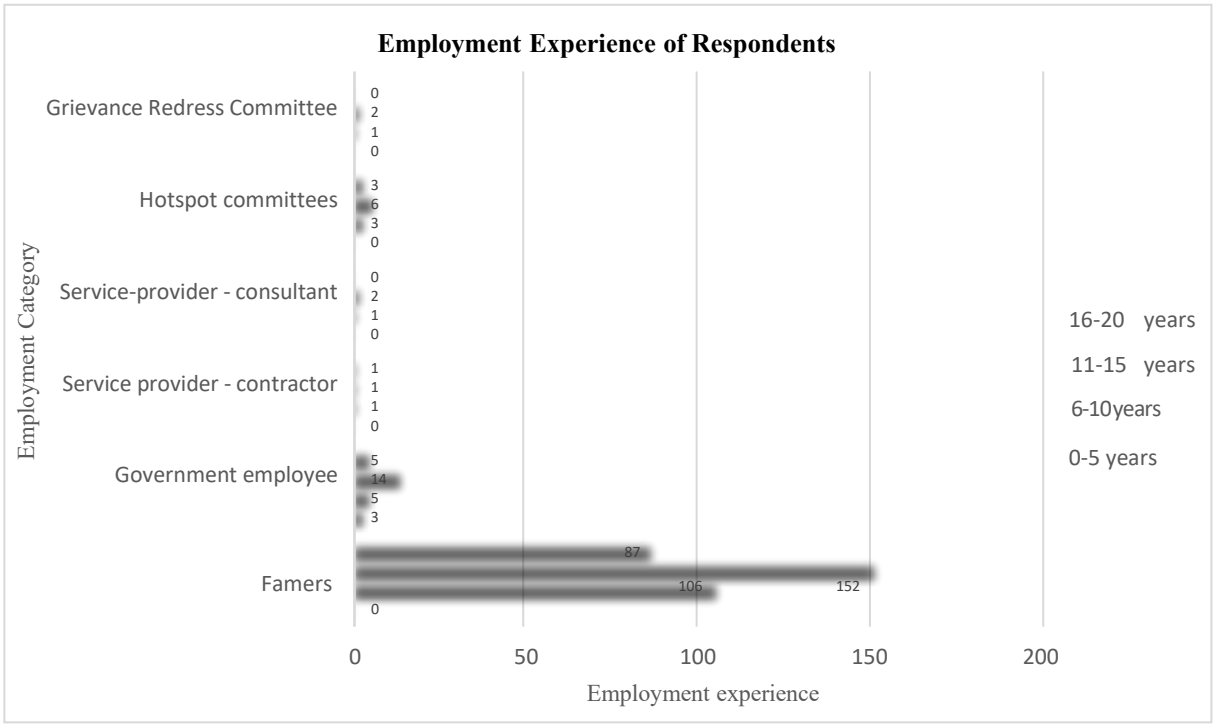
(See Appendix A.4)

The findings in Figure 6 show that the highest level of education achieved is graduate level. However, this level was attained among government employees, Grievance Redress Committee, Service provider-contractor and Service provider-consultant. The lowest level of education was attained among the smallholder farmers, who were the local community directly involved in the catchment restoration in their local environment. 138 out of the 345 farmers had attained primary education as their highest level of education, 56 farmers had completed secondary education while 134 had never gone to school, and only 17 farmers had completed technical vocational education. This provides insights into the specific awareness and communication strategies that need to be utilized to engage the same community with members who are at different levels of education. The level of awareness and knowledge

about catchment restoration and management issues tends to be tailored differently among community members who have different levels of education.

Figure 7

Employment Experience of Respondents



Source : SQ7, N=345, IQ6, N=24, FGD 1(D)=24 ; TN=393

(See Appendix A.5)

The findings show that 96 of the respondents had experience between 16 to 20 years in their various fields of employment, while 177 of the respondents had experience between 11 to 15 years, 117 respondents had experience between six to 10 years and only 3 respondents had experience between 0-5. The significance of this is that the study was carried out among respondents who were knowledgeable in the work they did and on the topic under study. This gave me the confidence that they provided their insights based on their personal experience, therefore a high likelihood that the results from the survey were credible, reliable, and valid. The implication is that the research findings and recommendations that were informed by the respondents' experiences and perspectives will be accepted by the

policymakers at the Ministry of Water and Environment, service contractors, supervising consultants, and other stakeholders to improve local community participation in catchment restoration.

Insights Regarding how the Local Community Participated in Catchment Restoration

Community Participation in the Design of Catchment Restoration Interventions

Local community participation in the design of catchment restoration interventions was measured through community participation in problem identification during the design of the restoration interventions and in decision making in designing actions for catchment restoration.

According to the results from Table 2, the local community was not involved in the identification of problems for catchment restoration. This was confirmed by 94% of the respondents who disagreed with the statement that the local community participated in problem identification in catchment restoration in comparison with the 6% who agreed.

Table 2

Participation in Problem Identification during Design of Actions for CR

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total Percentage
a. The local community is informed about the problem identification process in the design of actions for catchment restoration	8%	18%	0%	55%	19%	100%
b. The local community is involved in identifying problems for catchment restoration	0%	6%	0%	52%	42%	100%
c. The local community is trained to identify problems for catchment restoration	0%	20%	5%	45%	20%	100%

Source: SQ8a-c, N=345

Table 3

Participation in Decision Making in the Design of Actions for Catchment Restoration

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total Percentage
d. The local community participates in making decisions in the design of activities to restore the catchment	5%	20%	0%	45%	30%	100%
e. The local community works together with the service provider to make decisions in planning for activities to restore the catchment	6%	12%	22%	35%	25%	100%
f. The local community works together with the district leaders to make decisions in the design of activities to restore the catchment	15%	35%	10%	15%	25%	100%
g. The local community works together with the staff of the Ministry of Water and Environment to make decisions in the design of activities to restore the catchment	5%	25%	15%	25%	30%	100%
h. The local community is involved from the beginning of decisions rather than after decisions are made	3%	20%	0%	37%	40%	100%
i. The local community has the final say in deciding which restoration activities to implement (e.g., choosing specific methods).	10%	19%	4%	23%	44%	100%
j. The local community feels a sense of ownership over the catchment restoration project.	8%	32%	0%	24%	36%	100%
k. The local community has significant control over the direction and goals of restoration activities.	0%	32%	0%	22%	46%	100%

Source: SQ8d-8k, N=345

Regarding decision making in the design of the catchment restoration interventions, the results from Table 3 above indicated that the majority 77% disagreed with the statement

that the local community is involved at the beginning of decisions rather than after decisions are made in comparison with 23% who agreed. This could be a pointer as to why there is continuous degradation in the areas where the Ministry of Water and Environment has implemented the catchment restoration project in Awoja catchment, despite the use of a community-led approach for the implementation of the project. The finding is in agreement with the study findings that were mentioned in the literature review (Kinyata & Abiodun, 2020) which confirmed that development projects that systematically engage communities from the initial design to implementation, monitoring, and evaluation are more successful and sustainable compared to those which omitted some of the stages of community involvement. In addition, the finding agrees with the UNDP Midterm Evaluation (2023) of the Restoration of Wetlands and Associated Catchments in Eastern Uganda, which showed that districts which worked with their communities to create project designs obtained better community involvement and complete support for their interventions which will sustain the project's results in the future. (UNDP, 2023).

The interviews that I conducted with the district level project focals, the Ministry of Water and Environment project staff, the Sub Catchment and Micro Catchment Management Committee, Grievance Redress Committee and the implementing and supervising Service Providers revealed a surprising truth that the local community was not directly involved in the design phase of the project. This was confirmed by a Sub Catchment management committee member when he commented:

> To be honest, the Ministry carried out stakeholders' consultations workshops for this project at the district level. All of us the committees, departmental and political heads from the Sub Counties and district, NGOs, and private sector converged in Mbale to make decisions on behalf of the community…unfortunately when implementation started, the income-generating activities were already decided by the ministry out of

> the discussions from the 5 districts, and they could not change with what the communities badly needed in our district...

Seventeen out of the twenty four respondents interviewed indicated that the local community was not directly involved in assessing their needs and priorities while all the respondents interviewed indicated that they participated in the design of the project through other activities like catchment assessments, planning meetings, and development of the catchment management plan. However, they revealed that these were all at higher levels of representation which could have omitted priorities of the local community in specific districts. Some of the reasons the respondents interviewed gave were limited budget and time constraint to complete the development of the project proposal within the shortest time possible. These gaps should not have arisen, because the government of Uganda catchment management planning and implementation guidelines developed and approved in 2013 by the Ministry of Water and Environment provide a protocol for stakeholder engagement in catchment planning and management from the catchment level to the micro catchment level, which includes the village and parish level, where the local community is located. It is therefore possible that the local community can be involved in the design of future catchment management projects to increase ownership and longterm sustainability of the project outcomes and to achieve the overall goal of the project.

Insights into Community Participation in the Implementation of Catchment Restoration

Local community participation in catchment restoration was measured in terms of their access to information about restoration needs assessment, their involvement in needs assessment, and their actual involvement in the implementation of the restoration activities.

Table 4

Participation in Needs Assessment for Catchment Restoration

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total Percentage
a. The local community is informed about the needs assessment of the activities to restore the catchment	4%	18%	7%	56%	15%	100%
b. The local community is involved in the real assessment of their needs in the restoration of the catchment	0%	30%	0%	50%	20%	100%
c. The local community is trained to conduct needs assessment for the restoration of the catchment	0%	20%	5%	45%	30%	100%

Source: SQ9a-9c, N=345

Table 5

Participation in the Implementation of Activities to Restore Awoja Catchment Restoration

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total percentage
d. The local community is informed about the implementation process of catchment restoration	48%	62%	0%	0%	0%	100%

e. The local community participates in the implementation of activities to restore the catchment	55%	45%	0%	0%	0%	100%
f. Activities to restore the catchment is controlled by the Service Provider	24%	45%	0%	35%	0%	100%
g. The local community decides how restoration activities are carried out on their land (e.g., choosing locations for interventions).	12%	14%	0%	46%	28%	100%
h. The local community feels responsible for the success of the restoration activities.	15%	28%	2%	30%	25%	100%

Source: SQ9d-9h, N=345

According to Table 5, the local community participated in the actual implementation of activities to restore Awoja catchment. The findings revealed that 100% of the respondents agreed with the statement that the local community was informed about the implementation process of catchment restoration, as well as were involved in the actual implementation of the activities to restore the catchment. This finding is also supported by the responses from the focus group discussions that I held with twenty four respondents, who gave numerous counts of their participation in the implementation of the restoration activities. They indicated that the local community participation in the restoration activities included the provision of casual labour and locally available raw materials, planting trees and grass to protect the degraded riverbanks and farmlands, clean-up of the water sources, documentation of their experiences, and lessons in catchment restoration. In the group discussions, a farmer in the first focus group confirmed this when he commented:

> …we planted over three thousand indigenous trees along the riverbank and stabilised it by planting nappier grass.

A farmer in the second focus discussion group also confirmed their participation when she commented:

> …weparticipated in producing a video on the success, lessons, and challenges in the restoration of our wetlands, and riverbanks… It is also now used to sensitize communities in other sub-counties and the entire district where the Ministry of Water and Environment is doing its work.

The findings also revealed that although the local community was highly involved in the implementation of the activities, much of the control of the implementation process was in the hands of the implementing Service Provider. 70% of the respondents confirmed that the activities intended to restore the catchment were controlled by the contracting Service Provider. This could partly explain the findings from Table 4, where 70% of the respondents disagreed with the statement that the local community was involved in the real assessment of their needs in the restoration of the catchment, while from Table 5, 74% disagreed with the statement that the local community decides how restoration activities are carried out on their land. The findings are consistent with the analysis of Chambers (2012), on the four forms of community participation as cited by Kinyata and Abiodun (2020). Chambers emphasized that the four forms of community participation namely, community involvement, control, feedback, and ownership are interlinked, and suggests that none of them should therefore be ignored to achieve the expected outcomes and benefits of community participation. Based on Chamber's analysis of the forms of community participation, the findings in Tables 4 and 5 reveal a major gap that occurred in local community participation in catchment restoration in Awoja catchment. Accordingly, community involvement is the first phase of community participation which addresses the aspects of information, capacity building, and preparation, as well as the feedback phase which encompasses consultations with the local communities to tap into their experiences and indigenous knowledge and assess their needs and priorities. This must have been one of the reasons why the respondents highly disagreed with the statement that the local community in Awoja was involved in the real assessment of their

needs in the restoration of the catchment, as well as highly disagreed with the statement that the local community decided how restoration activities were carried out on their land. This agrees with David's Wheel of Participation (1998), which places people who receive information about what will happen but do not have decision-making power at his "Information" stage. This is also in agreement with Arnstein's Ladder of Participation (1969), which places this kind of involvement at the lower stair as basic and closer to "informing", which fails to achieve actual involvement because farmers did not get to decide project priorities or shape project development. This weak model of participation restricts people from learning together while also preventing them from developing ownership and shared reflection which are critical to sustaining change. The findings suggest that restoration projects must establish community participation from the start, particularly during needs assessment to develop genuine and meaningful participatory approaches.

Insights into Community Participation in Monitoring and Evaluation of Catchment Restoration

Local community participation in monitoring and evaluation was measured in terms of their access to information about the supervision of restoration activities, their involvement in the monitoring, supervision, evaluation of restoration activities, and their control of the monitoring and evaluation processes in Awoja catchment.

Insights from Community Participation in Monitoring and Evaluation of Restoration Interventions

Table 6

Participation in Monitoring and Evaluation of Catchment Restoration Interventions

Statement	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Total percentage
a. The local community is informed about the monitoring of the activities	42%	36%	0%	18%	6%	100%

b. The local community is informed about the evaluation of the activities done to restore the degraded natural surroundings in their area	2%	1%	2%	62%	33%	100%
c. The local community is involved in the monitoring of activities done to restore the degraded natural surroundings in their area	7%	70%	3%	10%	10%	100%
d. The local community is involved in the evaluation of activities done to restore the degraded natural surroundings in their area	0%	3%	0%	70%	27%	100%
e. Evaluation of restoration activities is mainly done by the senior authorities	20%	55%	0%	25%	0%	100%

Source: SQ10a-10e, N=345

The results from Table 6 show that the local community is involved in monitoring and supervising restoration activities in the Awoja catchment. This was confirmed by 77% of the respondents who agreed with the statement that the local community is involved in the monitoring of activities done to restore the degraded natural surroundings in their area compared to 20% who disagreed. This finding agrees with the responses received from the focus group discussions. The respondents mentioned that the local community participated in checking progress in the growth and recovery of the areas restored, observed changes in the physical soil conditions, data collection of completed works, recording and reporting any positive changes or threats in their local environment. One of the hotspot committee members confirmed this during the focus group discussions when she commented,"…..we counted all the surviving trees after dry season, and asked the service provider to provide more for replanting in rain season. " This confirmation was similar to the response from a micro catchment committee member in the second Focus Group Discussion, when he commented, "We wrote down the records of the total seedlings received and reported to the officers about

the tree survival rates on monthly basis for six months, until they had grown to a good height".

However, fourteen out of twenty four respondents interviewed mentioned incident-driven monitoring related to destruction of structures by flooding, loss of tree seedlings by excessive heat, destruction of trees by stray animals. While the respondents percentages show that the local community involvement in monitoring was high, the quality of their participation was more incident driven than the While the respondents percentages show that the local community involvement in monitoring was high, the quality of their participation was more incident driven which is reactive instead of systematic. This finding aligns with similar evidence from the Awoja catchment, where community participation has been found to vary considerably across sites and phases, with environmental monitoring specifically weak, demonstrating that participation is deficient of structured mechanisms through which communities can be meaningfully involved towards sustaining the catchment (Akello et al., 2015). A midterm evaluation of the restoration of wetlands and associated Catchments in Eastern Uganda by the United Nations Development Programme also observed that communities were mainly responding to the occurrence of some obvious environmental hazards as opposed to participation in any formal monitoring activities hence the need to strengthen community based monitoring systems and skills so as to ensure improvement in community participation from a reactive mode to a more proactive mode (UNDP, 2023).

Insights on Community Participation in Addressing Corrective Activities

Table 7

Participation in Addressing Corrective Activities in Catchment Restoration

Statement	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Total Percentage
f. The local community is informed about the results of the evaluation of the restoration activities	2%	2%	0%	64%	31%	100%
g. The local community is informed about the actions to be taken to improve the mistakes made in the implementation of the restoration activities	25%	70%	0%	5%	0%	100%
h. The local community gives their views on the activities planned to be implemented to correct the mistakes in the restoration of the catchment	25%	50%	0%	10%	15%	100%
i. The local community is involved in implementing the actions to correct the mistakes in restoration activities	45%	55%	0%	0%	0%	100%

Source: SQ10f-10i, N=345

According to the results from Table 7, the local community was involved in implementing the actions to correct the mistakes in restoration activities. All the respondents confirmed this, while 75% also confirmed that they provided their views on the planned activities to correct the mistakes in restoration of the catchment in comparison with 25% who disagreed. This finding agrees with the available literature in a study on community participation by Chambers (2012), who argued that when communities are involved in the aspects of information sharing, and preparation to offer sufficient and appropriate support to generate proposals for engagement and action, their capacity is built, and this improves productivity, realization of transparency, and accountability which in turn improves service delivery and produces better and sustained projects. During focus group discussions, a

hotspot committee made a comment that further concurs with Chamber's argument and the finding from Table 7,

> …when they made posters on the dangers of destroying our environment and the benefits of protecting our environment, we realized there were mistakes made in the translation into Lumasaba and we gave the team the right Lumasaba translation and corrected the entire poster.

Table 8

Local Community Ownership of the Catchment Restoration Activities

Statement	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Total Percentage
j. The local community helps set criteria for evaluating the success of restoration activities (i.e., defining what success looks like).	7%	8%	0%	60%	25%	100%
k. The local community feels responsible for the long-term management of the restored catchment.	4%	15%	0%	57%	24%	100%

Source: SQ10j-10k, N=345

Regarding community ownership of the catchment restoration interventions, the results from Table 8 shows that the local community does not own the longterm management of the project interventions to a greater extent. This was confirmed by 81% of the respondents who disagreed with the statement that the local community feels responsible for the long-term management of the restored catchment, while 85% of the respondents disagreed with the statement that the local community helps set criteria for evaluating the success of restoration activities. This finding agrees with the responses received from the focus group discussions and the interviews. The respondents mentioned that restoration activities on the community land was largely predetermined with very minimal involvement of the local community,

which made it challenging for them to fully own the entire project implementation process. This was confirmed by one of the Subcounty project focals when he commented, “Some community members rejected the income generating activities that were provided by the project….They claimed that those were not their priority interests and as a result, some of them refused to maintain the already constructed soil and water conservation structures on their land”. This was further confirmed by a respondent at a Focus Group Discussion when she commented, “……community members keep telling us, “You leaders benefit more than us and yet most of the work is done on our land”, ….and I think that’s why some of them don’t actively join in maintaining and taking care of the trees and the trenches”. This finding agrees with Akello et al. (2017), who demonstrate that communities in the Awoja watershed were omitted in the critical design, monitoring and evaluation processes, which weakened their acceptance and stewardship and therefore undermined their feeling of long term responsibility for the restored assets (Akello, Turyahabwe, Sseguya, Okullo, & Agea, 2017).

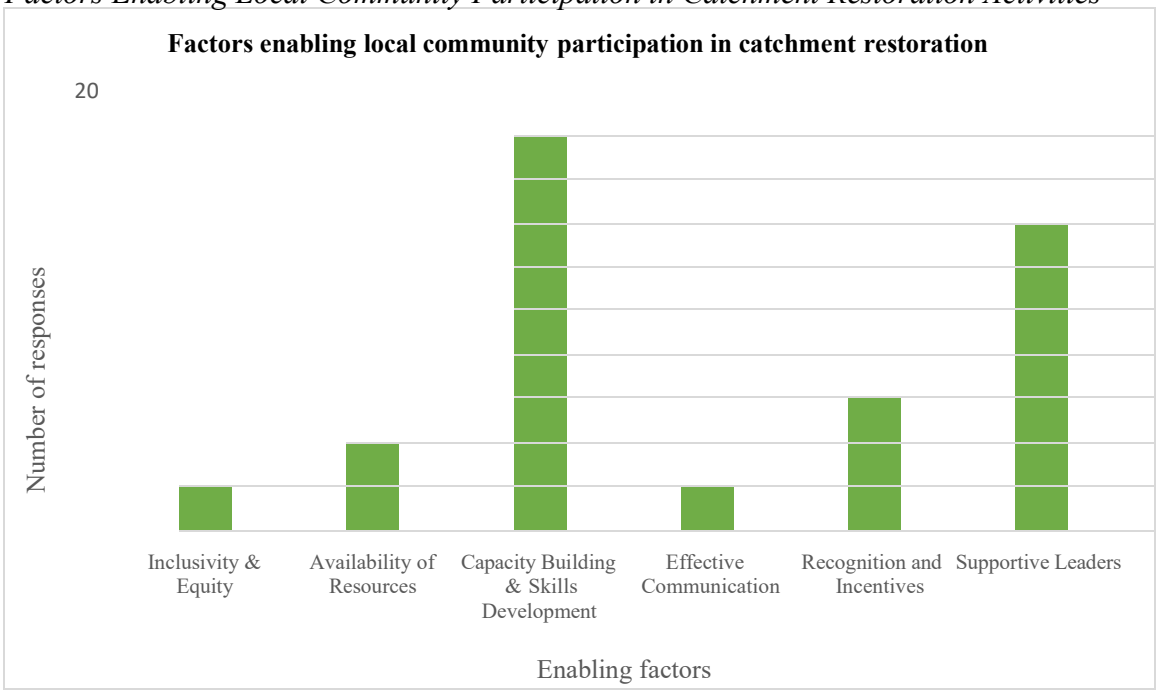
The findings reveal that tokenistic and non-empowering forms of participation weaken communities sense of responsibility for the long term ownership and maintenance of the catchment (Akello et al., 2017). This dynamic is consistent with the participation profile presented in the same paper; while mobilization of the community took place, the structuring of participation outside of decision making processes weakened community control over priorities and governance processes, which the authors associate with consultative rather than collegiate participation processes and a weaker sense of custodianship over outcomes (Akello et al., 2017). From a practice perspective, the findings show that strengthening ownership requires co-design processes that are early and continuous, early on articulation of livelihood benefits, and clearly defined roles in monitoring and evaluation processes that relate to the conversion of participation processes from a contribution to a process that fosters custodianship over assets. According to Akello et al., interventions that institutionalise

community decision making processes at the design and review processes are more likely to foster a sense of responsibility over maintaining restored catchments over time (Akello et al., 2017).

Insights into Local Community Perceptions about Factors Enabling their Participation in Catchment Restoration Activities

Figure 9

Factors Enabling Local Community Participation in Catchment Restoration Activities



Source: IQ10, N = 24 (More than one answer)

(See Appendix A.6 and A.7)

From the interview responses, inclusivity and equity, availability of resources, capacity building and skills development, effective communication, incentives and supportive are the factors that enable local community participation in catchment restoration. Capacity building and skills development, supportive leaders, recognition and incentives were cited as the most significant factors that enabled the local community participation in catchment restoration activities. This finding agrees with the study by Chambers (2012) who argued that

Community involvement as the first phase of community participation addresses the aspects of information, capacity building, and preparation to offer sufficient and appropriate support for engagement and action. Building the capacity of the communities who are the main beneficiaries of catchment restoration strengthens their ability and motivation capacity to participate in restoration activities.

In an interview with the Team Leader of the supervising consultant, he mentioned that all the trainings were tailored to suit the community through practical hands-on demonstrations on their farms before actual implementation was done at the degraded sites. In the discussion with the hotspot committees and micro catchment management committees in five different groups, they mentioned that capacity building through training in sustainable land management practices, wetlands, and riverbanks restoration enabled the community to participate because they learned new knowledge and skills to reduce soil erosion and floods, which in turn increased their confidence levels and the willingness to participate in the restoration activities. One of the hotspot committee members in the first discussion group commented:

> We were given knowledge on good land management practices….. I will take you to some of the areas where some of our community members have copied the same good practices on their own to prevent soil erosion in their distant farms…

In an interview with the Team Leader of the service contractor, he mentioned that incentives such as cash for civil works, gully rehabilitation, constructions of trenches and income-generating activities like bee hives were extended to some members of the community to motivate them to continue to manage the structures that were established to reverse soil erosion and floods in the catchment areas. He also mentioned that other non-cash incentives like public recognition and rewards to individuals and groups who actively participated in activities by issuance of certificates contributed to motivating the community

to work closely with the service providers to restore the catchment. This was confirmed by the Chairperson hotspot committee in the discussion group when he commented:

> ….the community members in Kapchorwa received certificates on the World Environment Day celebration at the district, which made them very excited and since then they are encouraged to continue with their work, they feel valued for their contribution… more members who had resisted the interventions on their farms have joined the rest of the participating groups.

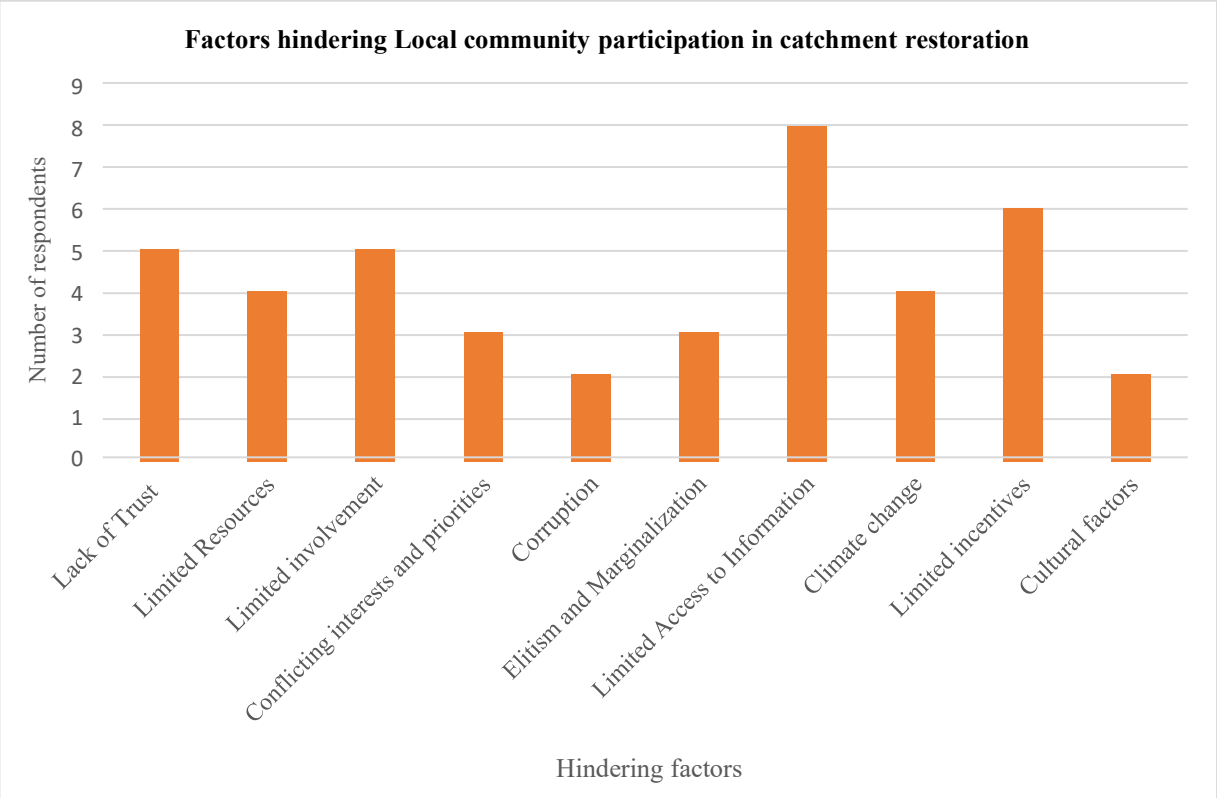
In as much as the policies did not feature among the significant factors that enabled community participation, an interview with the Team Leader-supervising consultant revealed that the introduction of a participation policy by the Ministry of Water and Environment enabled the participation of women in catchment restoration. It was required that the project engaged at least 40% of women to benefit from the project, so as to approve the project for implementation in a specific micro catchment. This could also partly explain why females constituted 38% of the respondents in the study. Without this policy in place, there was a high likelihood that the participation of the females could be less than what was realized in the project implementation. This claim was confirmed by one of the hotspot committee members in a group discussion when he said,

> ….the Ministry of Water and Environment instructed us that at least 40% of the project beneficiaries should be women…..They are participating actively in the gardens and the different trainings. They also benefitted from the energy-saving cookstoves.

Insights into how the local community perceives are the factors that hinder their participation in catchment restoration activities

Figure 10

Factors hindering Local Community Participation in Catchment Restoration



Source: IQ12, N = 24 (More than one answer)

(See Appendix A.8, A.9)

The results from the interviews show that lack of trust, limited resources, limited involvement, conflicting interests and priorities, corruption, elitism and marginalization, limited access to information, climate change, limited incentives and cultural factors were cited as the factors that hinder the local community participation in catchment restoration. On the other hand, limited access to information, limited incentives, limited resources, lack of trust and limited involvement were cited as the most significant factors that have hindered the local community's participation in catchment restoration activities. Studies carried out have

pointed out the barriers that hinder local community participation in development projects. The most notable barriers include poor communication and limited access to information to cause the needed questioning, among others. The interview findings align with Aref (as cited by Kinyata & Abiodun, 2020) who in his study, specified that inadequate information and knowledge about the projects was a result of poor communication which originated from ineffective communication channels.

An interview with the Contract Manager from the Ministry of Water and Environment pointed out the inadequate enforcement of the project communication strategy as a strategic gap that has contributed to ineffective communication with the stakeholders. He mentioned that,

> One of the gaps created in communication with stakeholders is poor enforcement of the project communications strategy in place. We have tried to work closely with the consultant to ensure that the contractor spells out the specific strategies for communication in the activities……but sometimes this is not effectively monitored at the activity implementation level.

This was very surprising to learn, that a major gap like this could not be timely addressed, even when the Ministry of Water and Environment had recruited a consultant to supervise the service contractor in the implementation of the project. This could also imply that the monitoring and review of the project progress by the contract management team of the Ministry of Water and Environment were not adequately addressed and on time, including mechanisms for feedback from stakeholders on the project implementation.

A documentary review and analysis of the project documents also confirmed the availability of a project communications strategy. The project documents I reviewed were the project proposal, the Stakeholders' Engagement Plan, the Awoja Catchment Management Plan, two annual reports, Uganda catchment management planning guidelines, and the World

Bank Environmental and Social Safeguards Framework . The finding from the documentary review revealed that whereas documents like the management plan emphasized the development of communications strategy at the catchment level, there was no catchment-level communications strategy developed and attached to the plan. Secondly, the documentary review analysis confirmed that the project's Stakeholders' Engagement Plan and Communications Strategy were comprehensively developed, which included communication needs and procedures to be followed in the communication and engagement of the different stakeholder categories. This implies that the communication strategy is one of the main social safeguards against poor communication and inadequate access to project information and therefore a community entitlement in its own right to avoid associated issues like suspicion, lack of trust, conflicts and promote local community participation in restoration activities.
The selective implementation and poor enforcement were technical errors by the service providers that need to be rectified and avoided in future restoration projects implemented by the Ministry of Water and Environment.

The discussions held with the micro catchment management committees and hotspot committees confirmed the existence of inadequate access to project information from the community's perspective. The respondents in the focus group discussions indicated that there was a regular occurrence of inadequate access to information on restoration decisions communicated to the beneficiaries. This was confirmed by one of the committee members who commented, "Community members have pieces of land at the riverbanks, yet when it's time to demarcate the land, they are not informed early enough about how many meters will be measured for planting trees and grasses".

Limited incentives as one of the significant factors that the majority of the respondents mentioned deserve attention, as it has a direct relationship with the motivation of community members to continue participating in restoration activities and the sustainability

of the project. An interview with the Team Leader of the service contractor indicated that the provision for tangible incentives such as cash for work was limited to a few sections of the community who participated in riverbank restoration and soil and water conservation while the income-generating activities, specifically bee keeping and energy saving cookstoves had provision for a limited number of the beneficiaries to directly benefit from the livelihood enterprises. He described how this affected commitment from the rest of the community members when he mentioned:

> ….Where the project provided few or little material support to beneficiaries like cash and income generating activities which they perceived did not make any economic sense, they tended to withdraw and give excuses to participate in the restoration activities.

Unlike other benefits, all the community members who forewent an opportunity cost of loss of livelihoods through restoration activities on their land or those who left the sensitive areas like the riverbanks where they previously cultivated crops to sustain their families, deserved to be prioritized to have an equal chance to benefit from income-generating activities to improve their household incomes.

The lack of trust among the local community members towards the leaders was directly related to their previous experience in the implementation of similar government-led restoration processes. The collaboration and negotiation with the local community did not yield positive results enough to secure their commitment to maintaining and sustaining the completed restoration works. Responses from the focus group discussions indicated that where consensus was not amicably reached with the communities, the majority of the tree seedlings and grasses planted were uprooted and destroyed. The Chairperson of the hotspot committee confirmed this in his comment,

> Last year, National Environment Management Authority officials failed to negotiate with landowners on the 30 metres to demarcate the riverbanks. Some of the people in the area lost their land to planting trees at the riverbanks but they also ended up uprooting all the tree seedlings that were planted.

The interviews conducted further confirmed the lack of trust among the local community, when the Chairperson of the micro catchment management committee commented, "People here no longer fully trust projects that are short to mid-term because previous ones promised tangible material things and never delivered……some of those were mainly due to inadequate budgetary provisions." This could be one of the pointers to the problem of continuous degradation of the environment and water resources in the areas where the Ministry of Water and Environment has implemented the catchment restoration project. Without mutual dialogue and consensus building with the local community in catchment restoration, sustainability of the heavy restoration investments on the ground will continue to remain far from being achieved. The local community are resident in the areas, they have the experiences and the indigenous knowledge that can be tapped to restore, and sustainably manage the environment and water resources in Awoja catchment.

Insights into the Level of Community Participation in Catchment Restoration in Awoja Catchment

The level of local community participation in catchment restoration was measured by assessing their participation in the design, implementation, monitoring, and evaluation of catchment restoration interventions. I analyzed the subsidiary insight question using the mean, which shows the average of the responses regarding the level of agreement or disagreement with the statements about the local community participation in the design, implementation, monitoring, and evaluation. The details of the findings are presented in the tables below.

The Level of Local Community Participation in the Design of Catchment Restoration Interventions

The level of local community participation in the design of catchment restoration was measured by their participation in problem identification and decision making in the design of actions for catchment restoration.

Table 9

Participation in Problem Identification during the Design of Actions for Catchment Restoration

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total %	Rank	Interpretation
a. The local community is informed about the problem identification process in the design of actions for catchment restoration	8%	18%	0%	55%	19%	100%	1.00	Very Low
b. The local community is involved in identifying problems for catchment restoration	0%	6%	0%	52%	42%	100%	0.50	Very Low
c. The local community is trained to identify problems for catchment restoration	0%	20%	5%	45%	20%	100%	0.38	Very Low
Cumulative mean							**0.63**	**Very Low**

Source: SQ8a-8c, N=345

Legend:0.50-1.79 Very low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 high, 4.20-5.00 Very High

Table 10

Participation in Decision Making in the Design of Actions for Catchment Restoration

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total %	Rank	Interpretation
d. The local community participates in making decisions in the design of activities to restore the catchment	5%	20%	0%	45%	30%	100%	0.65	Very Low
e. The local community works together with the service provider to make decisions in planning for activities to restore the catchment	6%	12%	22%	35%	25%	100%	0.69	Very Low
f. The local community works together with the district leaders to make decisions in the design of activities to restore the catchment	15%	35%	10%	15%	25%	100%	0.87	Very Low
g. The local community works together with the staff of the Ministry of Water and Environment to make decisions in the design of activities to restore the catchment	5%	25%	15%	25%	30%	100%	0.72	Very Low
h. The local community is involved from the beginning of decisions rather than after decisions are made	3%	20%	0%	37%	40%	100%	0.61	Very Low
i. The local community has the final say in deciding which restoration activities to implement (e.g., choosing specific methods).	10%	19%	4%	23%	44%	100%	0.66	Very Low
j. The local community feels a sense of ownership over the catchment restoration project.	8%	32%	0%	24%	36%	100%	0.73	Very Low
k. The local community has significant control over the direction and goals of restoration activities.	0%	32%	0%	22%	46%	100%	0.63	Very Low
Cumulative mean							**0.69**	**Very Low**

Source: SQ8d-8k, N=345

Legend:0.50-1.79 Very low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 high, 4.20-5.00 Very High

With regards to problem identification during the design of restoration actions, local community participation was very low as most of the respondents showed their involvement in problem identification at a mean of 0.63. This means that the local community was not adequately informed and involved in the problem identification process in the design of actions for catchment restoration. On the other hand, regarding decision making, local community participation was also very low, as most of the respondents showed their involvement at a mean of 0.69, pertaining to the scale used in the study. This means that the local community did not adequately participate in making decisions in the design of activities to restore the catchment.

The low participation in problem identification and decision making regarding the restoration actions could be mainly because the local community was not directly involved in the design phase of the project. This gap, which was confirmed from the focus group discussions and the interviews revealed that district level and regional level stakeholders consultative engagements drew higher level technical and political representations from the targeted project districts to participate, where community needs assessments and intervention prioritization were done. This could have resulted in the omission of priorities of the local community at micro levels in the specific districts, despite the fact that community members are the principal custodians of the resource system in question. This pattern is echoed in similar findings in the national review of wetland catchment restoration in Uganda by Twinomujuni et al.,(2024), which attributed the failure of the wetland catchment restoration projects to design approaches that do not sufficiently incorporate local indigenous and traditional knowledge, in addition to the absence of community centred approaches from the
onset of planning the project activities. Similarly in Western Uganda, a study on Communication for Sustainable Catchment Management in Mpanga catchment revealed that in the catchment, catchment management approaches have been top down for many years and

as such failed to stimulate local participation. The study recommended participatory communication approaches, community based management systems and local leadership participation in order to strengthen local participation in catchment management (Mugabi, 2024). An evaluative study of the UNDP project "Restoration of Wetlands and Associated Catchments in Eastern Uganda" also highlighted the importance of design and implementation arrangements of catchment restoration projects. The study revealed that in order to increase the legitimacy of restoration activities among the local communities and for the local communities to adopt the restored wetlands, it is essential for the design and implementation arrangements of catchment restoration projects to build in local participation from the onset (Mwangi, J., & Mbogga, M. (2024). These studies generally confirm the current finding: that, without local participation or early local engagement, catchment restoration activities are unlikely to lead to longterm ecological and social changes.

The Level of Community Participation in the Implementation of Catchment Restoration Interventions

The level of local community participation in implementation was measured by their involvement in needs assessment and actual implementation of catchment restoration activities in the Awoja catchment.

Table 11

Participation in Needs Assessment for Catchment Restoration

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total %	Rank	Interpretation
a. The local community is informed about the needs assessment of the activities to restore the catchment	4%	18%	7%	56%	15%	100%	2.40	Low
b. The local community is involved in the real assessment of their needs in the restoration of the catchment	0%	30%	0%	50%	20%	100%	2.40	Low
c. The local community is trained to conduct needs assessment for the restoration of the catchment	0%	20%	5%	45%	30%	100%	2.15	Low
Cumulative mean							**2.31**	**Low**

Source: SQ9a-9c, N=345

Legend:0.50-1.79 Very low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 high, 4.20-5.00 Very High

Table 12

Participation in the Implementation of Catchment Restoration

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total %	Rank	Interpretation
d. The local community is informed about the implementation process of catchment restoration	48%	62%	0%	0%	0%	100%	4.88	Very high
e. The local community participates in the implementation of activities to restore the catchment	55%	45%	0%	0%	0%	100%	4.55	Very high
f. Activities to restore the catchment is controlled by the Service Provider	24%	45%	0%	35%	0%	100%	3.70	High
g. The local community decides how restoration activities are carried out on their land (e.g., choosing locations for interventions).	12%	14%	0%	46%	28%	100%	2.36	Moderate
h. The local community feels responsible for the success of the restoration activities.	15%	28%	2%	30%	25%	100%	2.78	Moderate
Cumulative mean							**3.65**	**High**

Source: SQ9d-9h, N=345

Legend:0.50-1.79 Very low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 high, 4.20-5.00 Very High

With regards to needs assessment at implementation phase, local community participation was low as most of the respondents showed their involvement in the real assessment of their needs in the restoration of the catchment at a mean of 2.31. This means that they were not involved in the actual assessment of their real needs at the implementation phase but rather implementation was initiated using the information generated and decisions made at the design of the project. Regarding actual implementation on the ground, local community participation was high, as most of the respondents showed their involvement at a mean of 3.65, pertaining to the scale used in the study. This means that the local community was informed about the implementation process and involved in the actual implementation of the activities to restore the catchment restoration. This could have been because the actual

restoration happens on the community land and there is no means by which restoration activities could commence on people's land without their prior and informed consent. The documentary review of the project document also revealed that the World Bank, which is the funding agency required documented evidence of written consent from every participating beneficiary through signage of the project implementation consent forms, as part of compliance to its Social Safeguards framework.

The Level of Local Community Participation in Monitoring and Evaluation of Catchment Restoration Interventions

Table 13

Participation in Monitoring and Evaluation of Catchment Restoration Interventions

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total %	Rank	Interpretation
a. The local community is informed about the supervision of the activities	42%	36%	0%	18%	6%	100%	3.96	High
b. The local community is informed about the evaluation of the activities done to restore the degraded natural surroundings in their area	2%	1%	2%	62%	33%	100%	1.77	Very Low
c. The local community is involved in the supervision of activities done to restore the degraded natural surroundings in their area	7%	70%	3%	10%	10%	100%	3.54	High
d. The local community is involved in the evaluation of activities done to restore the degraded natural surroundings in their area	0%	3%	0%	70%	27%	100%	1.79	Very Low
e. Evaluation of restoration activities is mainly done by the senior authorities	20%	55%	0%	25%	0%	100%	3.70	High
Cumulative mean							**2.95**	**Moderate**

Source: SQ10a-Q10e, N=345

Legend:0.50-1.79 Very low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 high, 4.20-5.00 Very High

Table 14

Participation in Addressing Corrective Activities in Catchment Restoration

Statement	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	Total %	Rank	Interpretation
f. The local community is informed about the results of the evaluation of the restoration activities	2%	2%	0%	64%	31%	100%	1.77	Very Low
g. The local community is informed about the actions to be taken to improve the mistakes made in the implementation of the restoration activities	25%	70%	0%	5%	0%	100%	4.15	High
h. The local community gives their views on the activities planned to be implemented to correct the mistakes in the restoration of the catchment	25%	50%	0%	10%	15%	100%	3.55	High
i. The local community is involved in implementing the actions to correct the mistakes in restoration activities	45%	55%	0%	0%	0%	100%	4.45	Very high
Cumulative mean							**3.48**	**High**

Source: SQ10f-Q10i, N=345

Legend:0.50-1.79 Very low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 high, 4.20-5.00 Very High

Table 15

Local Community Ownership of the Catchment Restoration Activities

Statement	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree	Total %	Rank	Interpretation
j. The local community helps set criteria for evaluating the success of restoration activities (i.e., defining what success looks like).	7%	8%	0%	60%	25%	100%	2.12	Low
k. The local community feels responsible for the long-term management of the restored catchment.	4%	15%	0%	57%	24%	100%	2.18	Low
Cumulative mean							**2.15**	**Low**

Source: SQ10j-10k, N=345

Legend:0.50-1.79 Very low, 1.80-2.59 Low, 2.60-3.39 Moderate, 3.40-4.19 high, 4.20-5.00 Very High

Concerning monitoring and evaluation, the results indicate that the local community participation was moderate, as most of the respondents showed their involvement at a mean of 2.95, pertaining to the scale used in the study. This means that information dissemination to the community about monitoring and supervision of the activities was realized to some extent, as well as some reasonable level of their involvement in the supervision and evaluation of the activities implemented to restore the catchment. In addressing corrective activities in catchment restoration, the results indicate that the local community participation was high, as most of the respondents showed their involvement at a mean of 3.48. This means that there was some considerable information disseminated to the local community about the actions to be taken to improve the errors made in the implementation of the restoration activities, their views on the activities planned to correct the errors in restoration were integrated, given that no activities could be implemented on their land without their consent, and that their actual involvement in the implementation of the actions to correct the mistakes in restoration activities was high.

However, community involvement in dissemination of results of the evaluation of the restoration activities is very low, as most of the respondents showed their involvement at a mean of 2.05, pertaining to the scale used in the study. The fact that the local community is not adequately informed and reached with the outcomes of the evaluation of the catchment restoration points to a communication gap in the participatory communication and downward accountability mechanisms within the catchment restoration project. Although the documentary review confirmed that the participatory aspect is adequately provided for in the project design, the two way communication between the implementing agency and the local communities during the implementation process appears not to be sustained in terms of provision of information relating to monitoring and evaluation which should be provided to communities in a manner that enhances their participation and awareness in the outcomes of the projects. This finding is consistent with the appraisal report of the SACRiAC project which identifies limited dissemination of monitoring and evaluation information with communities as a bottleneck to sustaining the continuous two way communication process between stakeholders during the whole project cycle African Development Bank Group, 2022). Similar findings have been confirmed by the EURECCCA programme which also noted the need to enhance the capacity of organizations involved in catchment restoration to manage knowledge and communication effectively in order to provide decision making information at the local level, which is another indicator of the challenge that organizations in Uganda are facing in terms of managing and disseminating information (Sahara and Sahel Observatory & Ministry of Water and Environment, 2024). These studies confirm the finding that this challenge is more a matter of implementation than of design and therefore undermines the continuous learning that is needed for local learning, for effective adaptive co management of catchments and therefore accountability. Dissemination of the outcomes of an assessment of a project to the local communities that benefited from the implementation of

the projects could enhance their ownership of the projects and therefore could be a factor that impacts positively on the sustainability of the achievements of the projects.

Summary of Findings

The study was on local community participation in catchment restoration in Awoja catchment, Kyoga Water Management Zone, in Eastern Uganda. It focused on four Subsidiary Insight Questions which were set to find answers about how the local community participates in catchment restoration activities, how the local community perceive are the factors that enable their participation in catchment restoration activities, how the local community perceive are the factors that hinder their participation in catchment restoration activities, and how the level of local community participation in catchment restoration in Awoja Catchment is characterized.

In terms of how the local community participates in catchment restoration activities, I found out that the catchment restoration project implemented by the Ministry of Water and Environment had a provision for the local community to participate in the design of the project, in the implementation of restoration activities, and monitoring and evaluation. The local community was not largely involved in the design of the project through problem identification and decision making in the design of restoration interventions. From my interview with the project Contract Manager, the process for stakeholder engagement was rushed due to time and budget constraints to develop the project proposal. This limited the stakeholders' consultations at the district and regional levels and thereby omitted the direct consultations with the local community, except through their representation by their local leaders from the Sub County level, which is provided for in the catchment management guidelines developed by the Ministry of Water and Environment.

In the implementation phase, the local community was involved in the restoration activities. All the respondents highly acknowledged that the local community was informed about the

implementation process of catchment restoration, as well as their involvement in the actual implementation of the activities to restore the catchment. However, my interview with the hotspot committees and the micro catchment management committees revealed that the local community participation in the assessment of their real needs at the commencement of the restoration activities was low. In the monitoring and evaluation phase, the local community was generally involved in the monitoring of the restoration activities and in the implementation of actions to correct the errors that occurred during implementation of the restoration activities. However, in my discussions with the hotspot and micro catchment management committee members, it was confirmed that the local community was not involved in the evaluation of the project, including providing feedback to them about the

outcomes of the project evaluation.

In terms of how the local community perceive are the factors that enable their participation in catchment restoration activities, inclusivity and equity, availability of resources, capacity building and skills development, effective communication, incentives and supportive leaders emerged as key. On the other hand, capacity building and skills development, supportive leaders, recognition and incentives were cited by the local community as the most significant factors that enabled their participation in catchment restoration activities. Although policies was not mentioned by the local community as one of the enabling factors, from my interview with the Team Leader-supervising consultant, the introduction of a participation policy of 40% women representation in the project by the Ministry of Water and Environment enabled the participation of women in catchment restoration. Otherwise, the project would have been dominated by the men who culturally

own the land where catchment restoration activities were implemented.

Regarding how the local community perceive are the factors that hinder their participation in catchment restoration activities, lack of trust, limited resources, limited

involvement, conflicting interests and priorities, corruption, elitism and marginalization, limited access to information, climate change, limited incentives and cultural factors were cited. However, limited access to information, limited incentives, limited resources, lack of trust and limited involvement were cited as the most significant factors that have hindered the local community's participation in catchment restoration activities. From my interview with the Contract Manager from the Ministry of Water and Environment, the inadequate enforcement of the project communication strategy contributed to limited access to project information, as a result of poor communication with the stakeholders amidst the existence of a hired supervising consultant to supervise the activities of the service contractor on behalf of the Ministry of Water and Environment.

In terms of the level of local community participation in the design of catchment restoration, it was very low. The community was not informed and directly involved in the problem identification and decision making processes in the design of actions for catchment restoration. They were instead represented by the district and subcounty local government officers at the stakeholder consultative engagements in the prioritization of local community needs for catchment restoration. This was a huge oversight on the part of the Ministry of Water and Environment. Regarding implementation, the level of local community participation in needs assessment at the commencement of the project was low. The commencement phase utilized information from the design phase to kick-start implementation, without a review to establish if the needs and priorities had changed over time. On the other hand, the level of community participation in the actual restoration activities was high. This was possible because of the donor condition by the World Bank to have all beneficiaries provide consent to work on their land as a prerequisite for approval for project implementation. Regarding monitoring and evaluation, the level of community participation in the supervision of the restoration activities was moderate while their

participation in addressing corrective activities in catchment restoration was high. However, community participation in the evaluation of the project did not occur, while feedback on the outcomes of the restoration evaluation was not made available to them to further appreciate their contribution in catchment restoration and their anticipated roles and responsibilities in the implementation of future catchment restoration projects. The finding also revealed that the local community did not own the longterm management of the project restoration interventions beyond the project. The contributing factors included lack of direct consultations with the local community at the design phase of the project where decisions regarding restoration needs and priorities, as well as livelihood enhancement priorities were made, which had a direct relationship with how the restoration activities were implemented and monitored on the ground. Similarly, the local community was not involved in the evaluation of the restoration interventions to cause the necessary localised adaptive learning for implementation of future restoration projects. This directly impacted on how the community participation and contribution would be converted to a process that fosters custodianship over the restoration assets for a sustained ownership of the restoration outcomes.

Chapter Five: Conclusions and Recommendations

This chapter presents the conclusions and recommendations based on the study Subsidiary Insight Questions;"How does the local community participate in catchment restoration activities?"; "How does the local community perceive the factors that enable their participation in catchment restoration activities?"; "How does the local community perceive the factors that hinder their participation in catchment restoration activities?"; and,"How is the level of local community participation in catchment restoration in Awoja Catchment characterized?". The conclusions address the Central Research Question,"What strategies can be applied to improve local community participation in future catchment restoration in Awoja?", while the recommendations proposed answer the Action Question,"How can the Ministry of Water and Environment improve local community participation in catchment restoration in Awoja?".

Conclusions

How the local community participate in catchment restoration activities

In terms of how the local community participate in catchment restoration, I conclude that the local community participated in catchment restoration through the different stages of the catchment restoration project. However, their participation varied across the design, implementation, monitoring and evaluation stages of the project. While the local community participation in the implementation stage of the project was high, their direct involvement in the design phase was absent as a result of a rushed stakeholder engagement process due to time and budget constraints. This resulted in a lack of trust among the local community, which may have negatively impacted the latter stages of catchment restoration. The community participation in monitoring and evaluation was equally very minimal. This was mainly due to limited information reaching the local community to enable their participation,

their marginalisation within the institutional Knowledge management processes which led to gaps in feedback mechanisms. Addressing the feedback deficit will require some deliberate changes to the current institutional arrangements and information sharing practices. In addition, there will be a need for much greater emphasis on downward accountability, and which has the effect of empowering the local community to be considered an equal stakeholders in the catchment restoration process.

How the local community perceive are the factors that enable their participation in catchment restoration

The factors that enabled local community participation in catchment restoration as perceived by them were inclusivity and equity, availability of resources, capacity building and skills development, effective communication, incentives and supportive leaders, which should be sustained and further strengthened. The project implementation policy of fair gender representation played a key role in increasing the participation of the women who were often marginalized in catchment restoration, given the fact that majority of them do not own land. These enabling factors can equally be replicated and upscaled across all catchment restoration interventions initiated by both the government and the non-state actors.

How the local community perceive are the factors that hinder their participation in catchment restoration

The factors that hindered local community participation in catchment restoration in order of importance were poor communication, limited incentives, lack of trust, cultural factors, conflicting interests, climate change, and corruption. Limited access to information, limited incentives and lack of trust were cited as the most significant factors that hindered the local community's participation in catchment restoration activities. These hinderances highlight the fact that community participation is not about their willingness to engage but is driven by a wide range of structural, economic and social barriers. Understanding these

barriers and addressing them will achieve a higher success rate in terms of ecological and social outcomes, in a participatory way rather than an imposed command-and-control manner.

The project communication strategy made provisions for stakeholder engagement including communication, unfortunately, the opportunity to utilize and enforce it to improve the level of local community participation was not seized. Strict adherence to the implementation of the strategy can reverse the limited access to project information and its associated effects related to community participation.

How the level of local community participation in catchment restoration in Awoja Catchment is characterized

The level of local community participation varied across the different stages of the catchment restoration project. In the design phase of the project, the level of community participation in catchment restoration was very low and largely ignored. The omission of direct consultations with the local community at the micro catchment level was a technical error that needs to be urgently addressed, and such unsustainable stakeholder engagement practices reversed.

In the implementation phase, the overall level of local community participation in catchment restoration activities was high due to the World Bank funding conditions, and this should be further strengthened and sustained. However, the level of local community participation in needs assessment at the commencement of the project was low. Their exclusion in restoration priorities needs assessment, and reliance on past information to kick-start project implementation was highly risky. The best option is to reverse this trend and explore re-engagement of the local communities in the pending restoration activities to improve their participation.

In monitoring and evaluation, the overall level of community participation was moderate. Worth noting, is that the level of community participation in the evaluation of the restoration intervention was low with limited access to feedback on the outcomes of the project evaluation for which they are supposed to be part. Strengthening feedback mechanisms through community awareness of their rights, roles, and responsibilities to demand their entitlements to participation could foster responsiveness and accountability on the part of the duty bearers.

Overall, local community participation at every stage of catchment restoration in Awoja catchment requires improvement. This necessitates a holistic approach to improve which should include strategies that can address the identified factors that hinder local community participation as well as strengthen the implementation of the identified factors that enabled their participation in the restoration interventions. This can be possible, if the following considerations are integrated into the planning of future catchment restoration projects: First, the consideration that catchment restoration is a social as well as an ecological process which requires time, patience, listening and a willingness to engage at the level of the local population. This demands a high degree of collaboration between leaders and practitioners who work together as fellow citizens in a process which seeks to empower local people through a process of social strengthening and the promotion of direct participation and inclusive, democratic governance mechanisms that respect local cultures and collaborative approaches and in this way underpin long term sustainability of the restoration process.

Second, that effective local community participation in catchment based restoration therefore requires careful consideration of the wider social context to ensure that communities are not marginalised and excluded in the planning and implementation of conservation initiatives but are instead empowered as active participants in the planning, implementation and monitoring of conservation projects. With the right support, communities

are able to play a full role in planning, implementing and monitoring catchment-based ecosystem restoration activities, thereby delivering more sustainable, community focused and resilient projects. This will in turn, have a greater chance of long term success and therefore lasting benefit for people and nature in equal measure.

Therefore, the lessons from the findings of this study have the potential to improve conservation practices at a catchment and national and level, thereby leading to more participatory conservation activities that deliver longer lasting benefits to both people and biodiversity.

Recommendations

Policy, Regulatory Support, and Alignment

The catchment management planning and implementation guidelines of 2013, developed by the Ministry of Water and Environment provide for a systematic and comprehensive bottom-up approach for the engagement of stakeholders from the micro catchment level as the first line of stakeholder engagement, to Sub catchment and catchment levels. Adherence to the Uganda catchment management and implementation guidelines of 2013, should be strengthened through reward systems and penalty mechanisms, to motivate compliance by implementers of catchment conservation and restoration interventions. The penalty should include non-payment to the implementers for the services offered with default in integration of the guidelines at the planning and implementation levels, to deter them from exclusion of the community at all stages of the project. It will help to improve and actualize the bottom-up community participation and collective decision-making in the design, implementation, monitoring, and evaluation of catchment management interventions.

Other factors such as conflicting interests and priorities, where the local community is omitted from participation in the design, and evaluation phase as a result of budget and time constraints should be addressed by consistently implementing the 2013 catchment management planning and implementation guidelines. In a situation where there is limited time and budget, the protocol of initiating the project co-design processes at the micro catchment level, where the local community is located should be strictly observed and adhered to.

Monitoring and Evaluation Systems Support

Clear systems for monitoring the implementation of the catchment management policies and strategies should be set up by the Ministry of Water and Environment to enable timely identification and management of emerging gaps in the community participation in the

design, implementation, monitoring, and evaluation implemented by the service contractors and supervising consultants. Specifically, clear targets and indicators for successful integration and implementation of the policies and strategies should be included in reporting and regularly monitored at the activity implementation level.

Capacity Building and Empowerment

Building the capacity of local and formal committee based institutions like the Local Environment Committees, and informal governance systems like the village hotspot committees cancatchment management committees is crucial to secure effective and sustainable stewardship of the restored catchments. More capacity building trainings should be offered in leadership, participatory monitoring, conflict resolution, to prepare them to manage the investments during and after the project closure by the implementing agencies.

In addition, increase community awareness about the existing catchment management policies that provide for their participation, rights, and responsibilities in decision-making processes, monitoring, and evaluation, so that they can be empowered to demand for their entitlement and seek accountability from project implementers. Collaboration and partnership between the local governments, Ministry of Water and Environment, and Civil Society Organizations should be explored to advance the capacity building of the community through training to acquire knowledge and skills in catchment restoration, micro level policy advocacy, engagement and implementation.

Appropriate Monetary and Non-Monetary Incentive Mechanisms

Incentives mechanisms should be implemented to motivate the community to continue with restoration activities and to improve their household incomes for the livelihood opportunities foregone in restoration. In the cases where the community has foregone their land to implementing restoration, the landowners should be rewarded with other income generating activities commensurate to the opportunity foregone, to diversify and improve

their livelihoods. Apart from skills and knowledge, other non-monetary incentives such as physical awards and certificates that publically showcase community contribution in restoration of the catchment should be sustained. Other than cash that is given to the community during restoration construction activities, other long-term monetary incentive mechanisms such as the Community Environment Conservation Fund which is already being implemented by other Non-Governmental Organizations like the Ecological Conservation Trust of Uganda in the Albertine region of Uganda should be explored and appropriately replicated for the sustainability of local community participation in catchment restoration.

Transparent and Culturally Responsive Communications Systems

Strict adherence to the implementation of the existing project communication strategy and Stakeholder Engagement Plan should be strengthened to address the existing communication challenges. Streamline feedback mechanisms to integrate timely and adequate access to information about restoration needs, supervision, monitoring and evaluation of the project. This should include the establishment of adequate communication mechanisms to ensure the dissemination of appropriate information through the use of a variety and suitable communication channels, and strategies that are appropriate for the different gender and age categories to deliver clear, adequate, timely, and consistent messages to the local community, taking into account the local culture of the communities concerned. Thus, the participation of communities can be strengthened through the organisation of village assemblies, and participatory community "Baraza" for active listening and learning. This will assist to address issues of mistrust within the community and works to address mutual accountability as it increases community members' awareness of their roles and responsibilities within their community.

Develop Structured Post-Project Transition Strategies

Implementing partners should build in a process for gradual handover of catchment restoration exit and sustainability responsibility. It should include a phasing plan for their withdrawal, with staggered handover of technical support, community based maintenance fund, while ensuring a direct linkage with the District technical teams to ensure continued follow up and oversight of the restoration activities implemented on the ground, so that the communities continue to be engaged beyond the project completion period.

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Appendix

Appendix A: Tables Accompanying Figures

A.1 Summary of Sample Size and Instruments of Inquiry

S/no	Method	Category of respondents	Population Size	Sample size	Sampling method
1	Oral survey questionnaire	Community members: Smallholder farmers	3400	276	Simple random
		Community Group Leaders: Hotspot Committee members		26	Simple random
		Community Group Leaders: Chairpersons of the farmers' groups		26	Simple random
		Local Leaders: LC 1 Chairpersons		10	Simple random
	Self-administered questionnaire	Local leaders: Micro-catchment management committees		7	Simple random
Total			**3400**	**345**	
2	Personal Interview	Project staff from the Ministry of Water and Environment	5	2	Purposive
		District project focal	1	1	Purposive
		Kapchorwa district local government Technical officers	5	3	Purposive
		Sub County project focals	3	3	Purposive
		Sub-County technical officers	9	4	Purposive
		Team Leader– Service Provider	1	1	Purposive
		Team Leader– Supervising Consultant	1	1	Purposive
		Chairperson– Sub-catchment Management Committee	1	1	Purposive
		Chairperson– Micro-catchment management committee	1	1	Purposive
		Service Provider's Field technical staff	5	2	Purposive
		Consultant's Field technical staff	5	2	Purposive
		Grievance Redress Committee members	15	3	Purposive
			48	**24**	
3	**Focus Group Discussions**	Hotspot committees	24	12	Simple random
		Micro-catchment management committees	25	12	Simple random
			48	**24**	
	Total		**3,496**	**393**	

A.1.1. Krejcie and Morgan Table for sample size determination for the study

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291

A.2 Gender of Respondents (Figure 4)

Gender	Famers	Government employee	Service provider - contractor	Service provider - consultant	Hotspot Committees	Grievance Redress Committee	Frequency	Percentage
Male	206	24	2	2	8	2	244	62.09%
Female	139	3	1	1	4	1	149	37.91%
					Total		**393**	**100%**

Source : SQ2, N=345, IQ1, N=24, FGD1, N=24 ; TN=393

A.3 Age Group of Respondents (Figure 5)

Age group	Farmers	Government employee	Service provider - contractor	Service provider - consultant	Hotspot committees	Grievance Redress Committee	Frequency	Percentage
17 years or younger	0	0	0	0	0	0	0	0%
18-35 years	17	7	0	1	3	0	28	7%
36-60 years	292	20	3	2	9	3	329	84%
61-75 years	36	0	0	0	0	0	36	9%
76 years or older	0	0	0	0	0	0	0	0%
	345	**27**	**3**	**3**	**12**	**3**	**393**	**100%**

Source : SQ3, N=345, IQ2, N=24, FGD2, N=24 ; TN=393

A.4 Education Level of Respondents (Figure 6)

Level of education	Farmers	Government employee	Service provider - contractor	Service provider - consultant	Hotspot committees	Grievance Redress Committee	Frequency	Percentage
Never went to school	104	0	0	0	0	0	104	26%
Completed primary education	138	0	0	0	2	0	140	36%
Completed Secondary education	86	0	0	0	7	0	93	24%
Completed Technical Education	17	0	0	0	3	1	21	5%
Completed University	0	17	2	2	0	2	23	6%
Completed Graduate level	0	10	1	1	0	0	12	3%
				Total			**393**	**100%**

Source : SQ5, N=345, IQ4, N=24 ; FGD1, N=24 ; TN=393

A.5 Employment Experience of the Respondents (Figure 7)

Employment experience	Famers	Government employee	Service provider - contractor	Service-provider - consultant	Hotspot committees	Grievance Redress Committee	Frequency	Percentage
0-5 years	0	0	0	0	0	0	0	0%
6-10 years	106	8	1	1	3	1	120	31%
11-15 years	152	14	1	2	6	2	177	45%
16-20 years	87	5	1	0	3	0	96	24%
Total							**393**	**100%**

Source : SQ7, N=345, IQ6, N=24 ; FGD3, N=24 ; TN=393

A.6 How the Local Community Perceives are the Factors Enabling their Participation in Catchment Restoration Activities (Figure 8)

Themes	Frequency	Percentage
Inclusivity & Equity	2	5%
Availability of Resources	3	7%
Capacity Building & Skills Development	18	42%
Effective Communication	2	5%
Recognition and Incentives	5	12%
Supportive Leaders	13	30%
Total	**43**	**100%**

A.7 Response to How the Local Community Perceives are the Factors Enabling their Participation in Catchment Restoration Activities (Figure 8)

Respondent No	Responses	Response codes	Themes	Assigned thematic Code and Count
1	Training improved understanding of soil and water management.	Knowledge and skills	Capacity Building & Skills Development	CPS
2	Availability of tree seedlings facilitated community participation.	Access to material support	Availability of Resources	AMS
3	Feeling listened to increased farmers' willingness to engage in restoration work.	Inclusive participation	Inclusivity & Equity	IPP
4	Recognition of community efforts motivated participation.	Motivation	Recognition & Incentives	MRI
5	Support from trusted local leaders motivated community members to participate.	Presence of Leaders	Supportive Leaders	SUL
	Practical demonstrations improved farmers' skills for restoration activities.	Knowledge and skills	Capacity Building & Skills Development	CPS
6	Local leaders were very active in explaining the benefits of the project to the farmers	Presence of Leaders	Supportive Leaders	SUL
7	Technical training simplified complex restoration concepts for farmers.	Knowledge and skills	Capacity Building & Skills Development	CPS
8	Timely information on activity schedules helped farmers plan participation.	Supportive communication	Effective Communication	SCL
9	Recognition of active groups strengthened motivation and ownership.	Motivation	Recognition & Incentives	MRI
10	Training helped farmers understand restoration practices and requirements.	Knowledge and skills	Capacity Building & Skills Development	CPS
11	Training workshops clarified restoration requirements and improved practice.	Knowledge and skills	Capacity Building & Skills Development	CPS
12	Knowledge sessions on tree species selection improved planting decisions.	Knowledge and skills	Capacity Building & Skills Development	CPS
13	Community meetings allowed farmers to select tree species and agree on contour spacing.	Inclusive participation	Opportunity for Community Input	IPP
	Presence of LC1 and local leaders encouraged community participation.	Presence of Leaders	Supportive Leaders	SUL
	On-site mentorship supported consistent application of restoration methods.	Knowledge and skills	Capacity Building & Skills Development	CPS
14	Clear explanation of expectations made participation easier for farmers.	Supportive communication	Effective Communication	SCL
15	Appreciation by leaders encouraged continued engagement in restoration activities.	Motivation	Recognition & Incentives	MRI

	Active engagement from traditional leaders inspired collective participation.	Presence of Leaders	Supportive Leaders	SUL

16	Farmers gained confidence after practicing seedling handling and spacing techniques.	Knowledge and skills	Capacity Building & Skills Development	CPS
	Local authorities simplified decision-making processes for farmers.	Presence of Leaders	Supportive Leaders	SUL
17	Continuous technical guidance supported sustained community involvement.	Knowledge and skills	Capacity Building & Skills Development	CPS
	Leaders encouraged transparency and trust in the restoration process.	Presence of Leaders	Supportive Leaders	SUL
18	Free seedlings and basic planting tools	Access to material support	Availability of Resources	AMS
	Community leaders actively followed up with households to increase turnout.	Presence of Leaders	Supportive Leaders	SUL
19	Local leaders helped organize and coordinate community members.	Presence of Leaders	Supportive Leaders	SUL
	Participation increased due to small incentives, including transport refunds, meals, and basic tools.	Motivation	Recognition & Incentives	MRI
	Field-based learning allowed farmers to apply knowledge immediately in their gardens.	Knowledge and skills	Capacity Building & Skills Development	CPS
20	Regular training strengthened community ownership of restoration activities.	Knowledge and skills	Capacity Building & Skills Development	CPS
	Group learning sessions enhanced peer-to-peer knowledge transfer.	Knowledge and skills	Capacity Building & Skills Development	CPS
21	Vulnerable households participated because they received free seedlings and basic tools.	Access to material support	Availability of Resources	AMS
	Demonstrations on contour layout improved farmers land preparation accuracy.	Knowledge and skills	Capacity Building & Skills Development	CPS
	Local leaders explained project benefits clearly, motivating participation.	Presence of Leaders	Supportive Leaders	SUL
	Farmers gained confidence through hands-on demonstrations and follow-up coaching visits.	Knowledge and skills	Capacity Building & Skills Development	CPS
22	Participation improved after the LC1 chairperson quickly resolved a boundary dispute.	Presence of Leaders	Supportive Leaders	SUL
	Follow-up coaching visits strengthened farmers' ability to apply new skills.	Knowledge and skills	Capacity Building & Skills Development	CPS
	The LC1 chairperson helped resolve conflicts, improving participation.	Presence of Leaders	Supportive Leaders	SUL
	Pruning demonstrations boosted farmers confidence to manage trees independently.	Knowledge and skills	Capacity Building & Skills Development	CPS
23	Practical training sessions helped farmers understand proper restoration techniques.	Knowledge and skills	Capacity Building & Skills Development	CPS

	Public acknowledgment of model farmers during community gatherings	Motivation	Recognition & Incentives	MRI

	Active involvement of the parish chief helped mobilize households and resolve attendance challenges.	Presence of Leaders	Supportive Leaders	SUL
24	Hands-on pruning sessions improved farmers' confidence to manage trees independently.	Knowledge and skills	Capacity Building & Skills Development	CPS
	Leaders motivated men and youth groups to commit to restoration work.	Presence of Leaders	Supportive Leaders	SUL

N=24 (More than one answer)

A.8 How the Local Community Perceives are the Factors that Hinder their Participation in Catchment Restoration Activities (Figure 9)

Themes	**Frequency**	**Percentage**
Lack of Trust	5	12%
Limited Resources	4	10%
Limited involvement	5	12%
Conflicting interests and priorities	3	7%
Corruption	2	5%
Elitism and Marginalization	3	7%
Limited Access to Information	8	19%
Climate change	4	10%
Limited incentives	6	14%
Cultural factors	2	5%
Total	**42**	**100%**

A.9 Response to How the Local Community Perceives are the Factors that Hinder their Participation in Catchment Restoration Activities (Figure 9)

Respondent No	Responses	Themes	Assigned Thematic Code and Count
1	Some members often heard about the training after it had already taken place.	Limited access to information	LAI03
	Cultural expectations often prevent some women from attending community meetings.	Cultural factors	CF02
2	Unpredictable rainfall patterns make it difficult to plan and care for new seedlings.	Climate change	CC03
	Critical project information often passed to leaders, creating suspicion.	Lack of Trust	LT05
3	Educated and Influential households were usually prioritized during distribution of project items.	Elitism & marginalization	EM02
	Past projects made promises that were never fulfilled.	Lack of Trust	LT05
4	Physical participation dropped when transport refund was not given to farmers from far parishes.	Limited incentives	LIN05
	Announcements were often received late when activities had already started.	Limited access to information	LAI01
5	Meetings were dominated by influential people, leaving others with no space to contribute.	Elitism & marginalization	EM03
	Distant farmers struggled to attend meetings far from their residence parishes without transport support.	Limited incentives	LIN03
6	Disagreements on where restoration sites should be located.	Conflicting interests & priorities	CIP03
	Seedlings distributed were not enough to cover all interested families.	Limited resources	LR03
7	Youth missed a lot of information because many updates were shared through smartphones they do not own.	Limited access to information	LAI08
	Some elders discouraged planting certain tree species near homes due to longstanding cultural beliefs.	Cultural factors	CF01
8	Spending the whole day volunteering without any kind of facilitation reduced morale.	Limited incentives	LIN01
	Many planning meetings take place without consulting ordinary community members.	Limited involvement	LI04
9	Some names on beneficiary lists were not part of the farmers but were added for personal gain.	Corruption	COR02
	Public acknowledgement of the youth was not made when they contributed free labour for digging trenches	Limited incentives	LIN04
10	Verbal announcements often reached too late because messages take long to circulate in villages.	Limited access to information	LAI06
	Involving farmers directly in selecting planting sites did not happen to the majority.	Limited involvement	LI05
11	Differing community expectations of livelihoods over restoration activities made agreements hard to reach.	Conflicting interests & priorities	CIP03
12	Women were told the project committee had no more space when they asked to join.	Limited involvement	LI03

	Working under intense heat has become more challenging and reduces turnout.	Climate change	CC04
13	Some less privileged families were left out because leaders assume they cannot manage restoration work.	Elitism & marginalization	EM01
	Shared few hoes among several families, slowing down land preparation.	Limited resources	LR01
14	Most messages are sent to the LC1s only, leaving many households uninformed.	Limited access to information	LAI02
	Recent floods swept away newly planted trees, discouraging replanting.	Climate change	CC02
15	Unless you know someone on the committee, you won't be selected as a beneficiary.	Corruption	COR01
	Limited number of watering cans causes delays in irrigating seedlings during dry seasons.	Limited resources	LR05
16	Long meetings without even basic refreshments reduce attendance significantly.	Limited incentives	LIN02
	Most activities are planned without the youth, and they are only informed at the last moment.	Limited involvement	LI02
17	Items like gloves were not available to encourage more of them to join restoration work.	Limited incentives	LIN06
	The extension worker rarely visited, leaving them unsure about how to apply technical advice correctly.	Limited access to information	LAI05
18	Some households doubted whether the project benefits would truly reach everyone equally.	Lack of Trust	LT05
	Several participants observed that the long dry spells make it nearly impossible to keep seedlings alive.	Climate change	CC01
19	Farmers prioritize food crops because they contribute directly to family survival, unlike tree planting.	Conflicting interests & priorities	CIP02
	Decisions about land and project activities come from the parish level, without involving farmers on their views.	Limited involvement	LI01
20	Project information often comes in fragments, leading to confusion.	Limited access to information	LAI07
21	Women feared joining field activities without proper protective gear.	Limited resources	LR04
22	Repeated unfulfilled promises made farmers sceptical about project timelines.	Lack of Trust	LT05
23	Households described how unclear instructions on seedling distribution caused misunderstandings.	Limited access to information	LAI04
24	Most decisions made by a small group of leaders without explanation undermined their trust.	Lack of Trust	LT05

N=24 (More than one answer)

Appendix B: Survey Questionnaire

Questionnaire Number : _____ Date : _____

Hello, my name is Harriet Drani Maturu. I am conducting a study for my master's in organizational leadership and management at Uganda Christian University, on local community participation in catchment restoration in the Awoja catchment. The purpose of this study is to understand how the local community has been involved in the activities that help to bring back the healthy condition of the land, water sources, wetlands, riverbanks, and forests, which is being implemented by the Ministry of Water and Environment in the Awoja catchment. The results from this study will help to make better decisions on how the involvement of the local community can be improved in future activities that are intended to rebuild our natural environment. As a beneficiary of this project, you have been selected for this study.

I would be very thankful if you could kindly answer the following questions. The information you give will be kept strictly private and will be used only for this study. Kindly DO NOT write your name on this questionnaire. Please answer the questions as honestly as possible. Mark your best answer for each question by putting a tick (✓) in the box.

Section A. Background Information

1. Location

(a) Parish: _____

(b) Village: _____

2. What is your gender?

☐ (a) Male

☐ (b) Female

3. What is your age?

☐ (a) 17 or younger

☐ (b) 18-35

☐ (c) 36-60

☐ (d) 61-75

☐ (e) 76 or older

4. What is your marital status?

☐ (a) Single

☐ (b) Married (civil, traditional, church)

☐ (c) Widow

☐ (e) Widower

☐ (f) Divorced / Separated

5. What is your highest level of achieved education?

☐ (a) Never went to school

☐ (b) Completed Primary education

☐ (c) Completed Secondary education

☐ (d) Completed Technical Vocational school

☐ (e) Completed University

☐ (f) Completed Graduate-level

6. What is your occupation?

☐ (a) Farmer

☐ (b) Government employed

☐ (b) Service provider - contractor

☐ (c) Service provider– consultant

☐ (d) Hotspot committee

7. How long have you worked in your area of employment?

☐ (a) 0-5 years

☐ (b) 6-10 years

☐ (c) 11-15 years

☐ (d) 16-20 years

Subsection B1: Planning

Question 8: Local community participation in planning for catchment restoration

To what extent do you agree with the following statements about local community participation in planning for catchment restoration?

No	Statement	Strongly Agree (5)	Agree (4)	Uncertain (3)	Disagree (2)	Strongly Disagree (1)
	Statements about local community participation in problem identification					
a.	The local community is informed about the problem identification process in catchment restoration					
b.	The local community is involved in identifying problems for catchment restoration					
c.	The local community is empowered to identify problems for catchment restoration					
	Statements about local community participation in decision-making	**Strongly agree (5)**	**Agree (4)**	**Uncertain (3)**	**Disagree (2)**	**Strongly disagree (1)**
d.	The local community participates in making decisions on activities to restore the catchment					
e.	The local community works together with the service provider to make decisions on activities to restore the catchment					
f.	The local community works together with the district leaders to make decisions on activities to restore the catchment					
g.	The local community works together with the staff of the Ministry of Water and Environment to make decisions on activities to restore the catchment					
h.	The local community is involved from the beginning of decisions rather than after decisions are made					
i.	The local community has the final say in deciding which restoration activities to implement (e.g., choosing specific methods).					
j.	The local community feels a sense of ownership over the catchment restoration project.					
k.	The local community has significant control over the direction and goals of restoration activities.					

Subsection B2: Implementation

Question 9: Local community participation in the implementation of catchment restoration

How strongly do you agree or disagree with the following statements about local community participation in the implementation of catchment restoration?

No	Statement	Strongly agree (5)	Agree (4)	Uncertain (3)	Disagree (2)	Strongly disagree (1)
a.	The local community is informed about the needs assessment of the activities to restore the catchment					
b.	The local community is involved in the real assessment of their needs in the restoration of the catchment					
c.	The local community is trained to conduct a needs assessment for the restoration of the catchment					
	Statements about local community involvement in the implementation	**Strongly agree (5)**	**Agree (4)**	**Uncertain (3)**	**Disagree (2)**	**Strongly disagree (1)**
d.	The local community is informed about the implementation process of catchment restoration					
e.	The local community is involved in the implementation of activities to restore the catchment					
f.	Activities to restore the catchment are controlled by the Service Provider					
g.	The local community decides how restoration activities are carried out on their land (e.g., choosing locations for interventions).					
h.	The local community feels responsible for the success of the restoration activities.					

Subsection B3: Monitoring and Evaluation

Question 10: Local community participation in monitoring and evaluation of catchment restoration

To what extent do you agree with the following statements about local community participation in monitoring and evaluation of catchment restoration?

No	Statement	Strongly agree (5)	Agree (4)	Uncertain (3)	Disagree (2)	Strongly disagree (1)
	Statements about local community involvement in monitoring and evaluation					
a.	The local community is informed about the supervision of the activities done to restore the natural surroundings in their area					
b.	The local community is involved in the supervision of activities done to restore the natural surroundings in their area					
c.	The local community is informed about the evaluation of the activities done to restore the natural surroundings in their area					
d.	The local community is involved in the evaluation of activities done to restore the natural surroundings in their area					
e.	Evaluation of restoration activities is mainly done by the senior authorities					
	Statement about participation in addressing corrective activities	**Strongly agree (5)**	**Agree (4)**	**Uncertain (3)**	**Disagree (2)**	**Strongly disagree (1)**
f.	The local community is informed about the results of the evaluation of the restoration activities					
g.	The local community is informed about the actions to be taken to improve the mistakes made in implementing the restoration activities					
h.	The local community is consulted on the activities planned to be implemented to correct the mistakes in the restoration of the catchment					
i.	The local community is involved in implementing the actions to correct the mistakes in restoration activities					
	Statement about ownership of the project					
j.	The local community helps set criteria for evaluating the success of restoration activities (i.e., defining what success looks like).					
k.	The local community feels responsible for the long-term management of the restored catchment.					

Section C: Enablers of Community Participation

Q11. What factors do you think enable your community to participate in catchment restoration activities? (Select the one that applies to you most.)

☐ (1) Awareness and education about the project
☐ (2) Training and capacity building
☐ (3) Financial incentives
☐ (4) Material support (e.g., tools, seedlings)
☐ (5) Strong community leadership and organization
☐ (6) Clear communication from project leaders
☐ (7) A strong sense of community ownership and pride in the project
☐ (8) Other (Please specify):_____

Q12. Please describe any specific factors that have personally motivated you to participate in catchment restoration activities.
(Open-ended): _____

Section D: Hinderances to Community Participation

Q13. What factors do you think hinder your community's participation in catchment restoration activities? (Select one that applies to you most.)

☐ (1) Lack of time due to other responsibilities
☐ (2) Lack of tools and planting materials
☐ (3) Lack of information or awareness about the project
☐ (4) Conflicting interests or priorities (e.g., farming needs)
☐ (5) Distrust in authorities or project leaders
☐ (6) Insufficient training or skills
☐ (7) Lack of community ownership or control over the project
☐ (8) Other (Please specify): _____

Q14. Please describe any specific challenges you have faced in participating in catchment restoration activities.
(Open-ended): _____

Section E: Level of Community Participation

Q15(a). How many catchment restoration activities have you participated in over the past year?

☐ (1) 0
☐ (2) 1–5
☐ (3) 6–10
☐ (4) More than 10

Q15(b). How often do you participate in catchment restoration activities?

☐ (1) Daily
☐ (2) Weekly
☐ (3) Bi-weekly
☐ (4)Monthly
☐ (5) Never

Q15(c). On average, how many hours per week do you spend on catchment restoration activities?

☐ (1) Less than 1 hour
☐ (2) 1–5 hours
☐ (3) 6–10 hours
☐ (4) More than 10 hours
☐ (5) I do not participate

Q15(d). How many project activities have you participated in? (Select all that apply.)

☐ (1) 1 project activity
☐ (2) 2 project activities
☐ (3) 3 project activities
☐ (4) 4 project activities
☐ (5) 5 project activities

Please mention them:_____

Q15(e). How would you rate your overall level of participation in catchment restoration activities?
(Scale: 1 = Not at all involved, 5 = Fully involved)

☐ (1) Not at all
☐ (2) Slightly involved
☐ (3) Moderately involved
☐ (4) Very involved
☐ (5) Completely involved

SECTION E: Community sensitivity about long-term ownership and sustainability.

Q16(a). To what extent do you feel that the catchment restoration project belongs to the local community?
(Scale: 1 = Not at all, 2 = Slightly, 3 = Moderately, 4 = Very, 5 = Completely)

☐ (1) Not at all– You feel the project has no connection to the local community
☐ (2) Slightly– You feel the project has a minimal connection to the local community
☐ (3) Moderately– You feel the project has a moderate connection to the local community
☐ (4) Very– You feel the project is strongly connected to the local community
☐ (5) Completely– You feel the project fully belongs to the local community

Q16(b). How much influence do you think the local community has over the long-term management of the restored catchment?
(Scale: 1 = No influence, 2 = Little influence, 3 = Some influence, 4 = A lot of influence, 5 = Complete control)

☐ (1) No influence– The local community has no say or impact on the long-term management of the restored catchment.

☐ (2) Little influence– The local community has minimal input, with their opinions rarely considered in decision-making.

☐ (3) Some influence– The local community is consulted, and their input is considered to some extent, but they lack significant decision-making power

☐ (4) A lot of influence– The local community has a substantial role, with their input highly valued and often shaping decisions.

☐ (5) Complete control– The local community has full authority, making all decisions about the long-term management without external oversight

Section F: Suggestions for Improvement

This section gathers feedback to inform strategies for enhancing participation and community ownership.

Q17. What strategies do you think the Ministry of Water and Environment could implement to increase community participation in future catchment restoration projects?
(Open-ended): _____

Q18. What can be done to increase the sense of ownership and responsibility among the local community for the catchment restoration project?
(Open-ended): _____

Q19. Based on your experience, what changes would you suggest to make participation more effective?
(Open-ended): _____

Section G: Additional Comments

Q20. Is there anything else you would like to share about community participation or ownership in catchment restoration?
(Open-ended): _____

Appendix C: Key Informant Interview Guide

Hello, my name is Harriet Drani Maturu. I am conducting a study for my master's in organizational leadership and management at Uganda Christian University, on local community participation in catchment restoration in the Awoja catchment. The purpose of this study is to understand how the local community has been involved in catchment restoration, which is being implemented by the Ministry of Water and Environment in the Awoja catchment. The results from this study will help to recommend strategies for how to improve the level of local community participation in future catchment restoration projects. As a key stakeholder in this project, you have been selected for this study.

I would be very thankful if you could kindly answer the following questions. The information you give will be kept strictly private and will be used only for this study.

1. What is your gender? (*Observe*)

☐ (a) Male

☐ (b) Female

2. What is your age?

☐ (a) 17 or younger

☐ (b) 18-35

☐ (c) 36-60

☐ (d) 61-75

☐ (e) 76 or older

3. What is your marital status?

☐ (a) Single

☐ (b) Married (civil, traditional, church)

☐ (c) Widow

☐ (e) Widower

☐ (f) Divorced / Separated

4. What is your highest level of achieved education?

☐ (a) Completed Primary education

☐ (b) Completed Secondary education

☐ (c) Completed Technical school

☐ (d) Completed University

☐ (e) Completed Graduate level

5. What is your occupation?

☐ (a) Farmer

☐ (b) Government employed

☐ (b) Service provider - contractor

☐ (c) Service provider– consultant

☐ (d) Hotspot committee

6. How long have you provided your services in catchment restoration?

☐ (a) 0-5 years

☐ (b) 6-10 years

☐ (c) 11-15 years

☐ (d) 16-20 years

Section B: Forms of Local Community Participation

7. How has your community been involved in the planning stage of the catchment restoration project, such as identifying problems or deciding on activities?
Probe: Describe any roles in setting goals or choosing methods. Was local knowledge or traditional practices incorporated?

8. What specific activities has your community participated in during the implementation of the catchment restoration project?
Probe: Examples include tree planting, building check dams, or attending workshops. Did the community decide how these activities were carried out?

9. How has your community been involved in monitoring and evaluating the catchment restoration project?
Probe: Describe any roles in supervising progress or assessing outcomes. Did the community help set evaluation criteria?

Section C: Perceived Enablers of Community Participation

10. In your opinion, what do you think are the factors that have enabled you and the local community to participate in the catchment restoration activities?
Probe: Include, "Can you give examples of what has worked well to encourage participation"?

11. Can you provide specific examples of what has worked well to encourage community participation?
Probe: Describe instances like effective training or community-led initiatives. How did these contribute to participation?

Section D: Perceived Hinderances to Community Participation

12. In your opinion, what factors have hindered the local community's participation in the catchment restoration activities?

Probe: What specific challenges have you faced in participating in restoration activities? How have these challenges affected your participation or the participation of the community?". How does a lack of ownership affect participation?

Section E: Level of Community Participation

13. How would you describe the overall level of community participation in the project? Is it high, low, or varied??

Probe: Include "Has participation changed over time? Are there differences between different groups or areas?"

14. On a scale of 1 to 5, where 1 is 'not at all' and 5 is 'completely,' how much do you feel the catchment restoration project belongs to the local community?

Probe: Does the community feel ownership or pride in the project? Are decisions driven by the community or external stakeholders?

Section F: Long-Term Ownership and Sustainability

15. How do you see the community's role in maintaining the restored catchment after the project ends?

Probe: Are there mechanisms for community management? What challenges might arise in sustaining the restoration?

16. What plans or support are in place to ensure the community can sustain the restoration long-term?

Probe: Examples include training or resource provision. How can these strengthen community ownership?

Section G: Suggestions for Improvement

17. What suggestions can you provide to improve community participation in future catchment restoration projects?

Probe: Consider changes in planning, implementation, or monitoring to enhance involvement.

18. What can be done to increase the community's sense of ownership and responsibility over the catchment restoration project?

Probe: Suggest ways to give the community more control or align the project with local priorities.

Thank you very much for your time and responses.I'msure this will help to improve the level of local community participation in the future catchment restoration

Appendix D: Focus Group Discussion Guide

Hello, my name is Harriet Drani Maturu. I am conducting a study for my master's in organizational leadership and management at Uganda Christian University, on local community participation in catchment restoration in the Awoja catchment. The purpose of this study is to understand how the local community has been involved in catchment restoration, which is being implemented by the Ministry of Water and Environment in the Awoja catchment. The results from this study will help to recommend strategies of how to improve the level of local community participation and making future catchment restoration projects work better.

Thank you very much for accepting to take part in this study. The views you give in this conversation will be kept strictly private and will be used only for this study. I request your permission to allow me to use a recorder to follow everything that you say. Given that we shall have a translation of the discussions in the local language, we are likely to use twice the initial time of 45minutes. I request one hour and thirty minutes of your time to conclude this discussion.

Section A: Forms of community participation

1. Participant Demographic Information (Before Discussion Begins)

The facilitator should obtain fundamental demographic information which includes

(a). Gender

(b). Age

(c). Level of education

(d). Number of years of experience in the work each respondent does

The Participant Profile Form should be used by participants before they begin the FGD. The information should not be requested through verbal communication when people first meet.

2. Participant Introductions

Kindly introduce yourself and the role you play in this project and in your community.

3. How has your community been involved in planning the catchment restoration project, such as identifying problems or choosing activities?
   Probe: Were you consulted early on? Did local knowledge or traditional practices shape the project's plans?
4. What specific activities has your community done to implement the restoration project? *Probe:* Examples might include tree planting, building check dams, or attending workshops. Did the community decide how these activities were carried out?
5. How has your community participated in monitoring or evaluating the restoration project?
   Probe: Have you helped check progress or assess results? Did the community help decide what makes the project successful?

Section B: Enablers of Community Participation in Catchment Restoration

6. What has helped your community to participate in the restoration activities?
Probe: Examples might include training, resources, or feeling the project belongs to the community. How have these factors encouraged involvement?

7. Can you share specific examples of what has worked well to support community participation?
Probe: Describe instances like effective meetings or community-led efforts. How did these make participation easier?

Section C: Hinderances to Community Participation in Catchment Restoration

8. What challenges have prevented your community from participating more actively in the restoration activities?
Probes: Do specific groups (e.g., women, youth) face unique challenges? How do these challenges affect their involvement? How have these affected the project's results?

Section D: Level of Community Participation

9. How would you describe the overall level of community participation in the restoration project - is it high, low, or varied?
Probe: Has participation changed over time? Do some groups (e.g., women, youth, or certain villages) participate more than others?

10. On a scale of 1 to 5, where 1 is "not at all", 2 is "Slightly", 3 is "Moderately", 4 is "Very", and 5 is "Completely", how much do you feel the restoration project belongs to your community?
Probe: Does the community feel proud or responsible for the project? Are decisions driven by the community or external groups?

Section E: Long-Term Ownership and Sustainability

11. How do you see your community's role in maintaining the restored catchment after the project ends?
Probe: Are there plans for the community to manage the restored areas? What challenges might you face in keeping it going?
12. What support or plans are in place to help your community sustain the restoration long-term?
Probe: Examples might include training or access to tools. How can these strengthen the community's sense of responsibility?

Section F: Strategies to improve community Participation in restoration activities

13. What suggestions do you have to improve community participation in future restoration projects?
Probe: Consider changes in how the project is planned, carried out, or monitored to involve the community more.
14. What can be done to make your community feel more responsible for and in control of the restoration project?
Probe: Suggest ways to give the community more say or align the project with local needs and values.

Thank you very much for your time and responses. God bless you all!!

Appendix E: Document Analyses

Document Reviews Checklist

Existing documents and records wee reviewed and analyzed to obtain qualitative secondary data. The Ministry of Water and Environment National Resource Centre was the main information center that was used to access the catchment management measures project documents, including the project implementation and monitoring reports, and other visual documentaries.

Documents that were Reviewed And Analyzed

1. Project document for implementation of the catchment management and restoration project (1)
2. Awoja Catchment Management Plan (1)
3. Project Stakeholder Engagement Plan (1)
4. Annual progress reports (2018 and 2023 and 2024) (3)
5. Project Communication Strategy (1)
6. Annual Monitoring and Supervision report (2024) (1)

Appendix F: Introductory Letter to the Study Respondents

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THE REPUBLIC OF UGANDA

MINISTRY OF WATER AND ENVIRONMENT

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KAMPALA –UGANDA

In any correspondence on this subject
please quote Ref. No. ***ADM/01/2024/0001***

14th August 2025

TO WHOM IT MAY CONCERN

RE: INTRODUCTION OF HARRIET DRANI MATURU FOR CATCHMENT RESTORATION STUDY IN AWOJA CATCHMENT, KYOGA WATER MANAGEMENT ZONE

The Government of Uganda (GOU) through the Ministry of Water and Environment (MWE), received funds from the World Bank to implement the Integrated Water Management and Development Project (IWMDP) through the Water Management Zones (WMZs). Component 3 of the project focuses on supporting communities to implement priority catchment management measures in the **Awoja catchment in Kyoga WMZ**. The MWE procured AidEnvironment as a contractor to support the implementation of the priority catchment management measures and the International Union for Conservation of Nature (IUCN) as a consultant to supervise the contractor during the implementation.

The purpose of this letter is to introduce to you Ms. Harriet Drani Maturu, a second-year student at Uganda Christian University pursuing a master's degree in organizational leadership and management. She seeks to research on local community participation in catchment restoration in Awoja. The purpose of the research is to understand how the local community has been involved in implementing the catchment restoration interventions in Awoja. The results from this research will help to make better decisions on how the involvement of the local community can be improved in future catchment management and restoration projects of the Ministry of Water and Environment.

We request your assistance to Ms. Harriet Drani Maturu in facilitating her smooth interaction with the project stakeholders, including the local communities to contribute to the success of this research.

Sincerely,

Eng. Maximo B. Twinomuhangi
Team Leader - KWMZ

CC: Team Leader, Aidenvironment, East Africa Office.
CC: Country Representative-International Union for the Conservation of Nature, Uganda Country Office
CC: District Natural Resources Officer, Kapchorwa DLG