

**GENDERED ACCESS TO MANAGEMENT OF FOREST RESOURCES IN
NGONG HILLS FOREST, KAJIADO NORTH SUB-COUNTY**

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**A PROJECT REPORT SUBMITTED TO THE DEPARTMENT OF
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DEVELOPMENT STUDIES OF THE UNIVERSITY OF NAIROBI.**

JULY 2023

DECLARATION

I declare that this report is my original work and has not been submitted to any other university for examination .

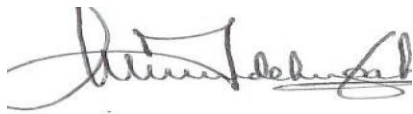
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This project has been submitted for examination with my approval as the university supervisor.



Signature _____ Date **4th July, 2023**

Prof. Owuor Olungah

DEDICATION

To all individuals, both men and women, residing in proximity to forests and relying on their resources, products, and services for their livelihoods, energy requirements, and economic well-being.

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I express my heartfelt gratitude to God for His abundant blessings and favor, enabling me to successfully complete this research work. I would like to extend my sincere appreciation to Prof. Owuor Olungah, my supervisor, for his invaluable guidance, counsel, and unwavering support throughout this journey. His expertise and encouragement were instrumental in my progress.

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LIST OF ACRONYMS AND ABBREVIATIONS

CFA	Community Forest Association
CEDAW	Convention on Elimination of All Forms of Discrimination
FAO	Food Agricultural Organization
FCMA	Forest Conservation and Management Act
FGD	Focus Group Discussion
KFS	Kenya Forestry Services
KII	Key Informant Interview
MP	Member of Parliament
NACOSTI	National Commission for Science, Technology and Innovation
SADC	Southern African Development Community
SEU	Social Exclusion Unit
SPSS	Statistical Package for the Social Sciences
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations environmental Programme

ABSTRACT

This study explored gendered access to and participation in management of forest related resources in Ngong Hills Forest, Kajiado North Sub County. It sought to identify resources in Ngong Hills Forest; assess the level of gendered access and participation in management of resources and to establish the challenges of gendered access to and participation in management of forest resources. The design employed was a descriptive survey, focusing on individuals residing in the Ngong Hills Forest areas. The study sampled 100 respondents randomly while the key informants and FGD participants were purposively sampled. Data was collected through a survey questionnaire, Key Informant Interview and FGD guides. Data analysis was done via the SPSS Version 26 after cleaning and checking for consistency. The qualitative data was transcribed, reviewed for accuracy and analyzed thematically. The results indicate that a significant number of people possess knowledge regarding certain resources present within the forest and were members of the Ngong Metro Hills Community Forest Association. Disparities in the gendered approach to management were noted in that although both men and women were represented, women were more actively engaged in forest management compared to men. However, it was noted that both men and women faced challenges in managing the resources of the forest. The study noted that there was a general lack of interest among men in forest resources management. Men instead, prioritized engaging in fast income-generating activities. The study concludes that there is a need for equal participation and involvement of both men and women in decision-making processes to ensure sustainable management of Ngong Hills Forest. The study recommends that the government should take proactive measures to promote gender equality in forest management. This can be achieved through increased advocacy efforts and raising awareness about the importance of inclusive participation in the forest's rehabilitation.

CHAPTER 1: BACKGROUND TO THE STUDY

1.1 Introduction

According to Degene and Ogega, 2021, gender equality pertains to a condition in which equal rights are granted to women and men, girls and boys, ensuring that all individuals have equal access to and benefit from various opportunities. This also means that sex is not a factor in terms of gaining entry to, exercising power over, or reaping the benefits of responsibilities, opportunities, resources, or data.

The United Nations Entity for Gender Equality and the Empowerment of Women (2022) asserts that gender equality encompasses recognizing and accommodating the divergent interests, needs, and priorities of men and women. Additionally, it involves equal importance to both the similarities and differences among individuals of different gender identities, considering the various roles they assume in society and beyond. This understanding aligns with the perspective put forth by the British Columbia University and the Canadian International Resources and Development Institute (2018).

Incorporating a gender perspective in biodiversity and natural resources management involves comprehending the roles, relationships, and distinctions among individuals and integrating them into project management. This includes recognizing the diverse roles, rights, and opportunities of both women and men, and empowering them for equitable access, utilization, conservation, and management of forest-related resources. It also entails evaluating the distinct ways in which climate change has impacted men and women (UN Women, UNEP, and UNDP, 2015).

According to Dejene and Ogega (2021), advocating for gender equality and women's empowerment in forest resources management leads to sustainable benefits for households and communities. Additionally, it contributes to enhanced well-being and improved environmental health outcomes.

Natural resources have historically been utilized differently by women and men due to gender roles being connected with various sets of knowledge and different duties in the management (Dejene and Ogega, 2021). UN Women, UNEP and UNDP (2015) emphasized that overlooking the challenges and opportunities women face in their diverse roles and responsibilities in natural resources management leads to persistent inequality. This, in turn, exacerbates issues of inaccessibility and exclusion, which have been identified as significant contributors to poverty. Recognizing and addressing existing gender inequalities in access to resources, involvement in decision-making, and benefit sharing is crucial for achieving sustainable management of forest resources. This context provided important guidance for the study that investigated gendered access to forest resource management in Ngong Hills Forest, Kajiado North Sub County, Kajiado County, Kenya.

Management of Forest Resources

Differences exist between men and women regarding their knowledge and utilization of forest resources. Importantly, gender relations and roles influence the manner in which they access, harvest, and utilize these resources. These factors are considered pivotal in understanding emerging forest-related concerns, including the varying risks and opportunities experienced by women and men in different contexts, particularly in the context of climate change (FAO and Center for People and Forest, 2015).

The dynamics of gender relations in the Brazilian Amazon forest are undergoing rapid transformations, leading to diverse outcomes that have implications for forest management practices, community food security, sustainable livelihoods, and the ability of both Amazonian women and men to address the challenges posed by climate change and global market pressures (Schmink and Garcia, 2015). The research conducted by Schmink and Garcia's (2015) emphasizes the importance of guaranteeing equal opportunities for both genders in the management of forest resources. Additionally, Amazonian tribes use a combination of techniques to manage the forest and accommodate their resource vocations, allowing them to meet consumer needs for products like food, medicinal plants, handicrafts, building materials, fuel wood, lumber, and many more.

Schmink and Garcia (2015) argue that Amazonian women have found more important detectable quality for their valuable activities, interests and capacities, hence embracing approaches that offer a better livelihood to their families and organizations including plausible administration of their backwoods.

In Asia and the Pacific, Nepal and the Philippines have made notable strides in incorporating gender perspectives into their forest policies and strategies. These countries serve as commendable models within the region. However, despite their progress, the integration of gender still encounters challenges, as the mere adoption of gender policies in forest management falls short of effectively addressing deeply ingrained gender inequalities in this domain (FAO and Center for People and Forest, 2015).

Furthermore, for gender equality to become a concrete and achievable milestone, gender targets, guidelines, action plans and strategies should be supported by adequate budgets

and there is also a need to roll out effective institutional mechanisms in the forestry departments and agencies (FAO and Center for People and Forest, 2015).

According to Ifegbesan et al. (2016), the economic and social well-being of women in sub-Saharan Africa is predominantly influenced by their access to and control over resources. However, men tend to take the lead when it comes to allocating resources. Particularly via marriage and family ties, women get access to financial resources within their extended families. More research conducted in SADC nations revealed that women were not afforded the same rights as males when it came to obtaining resources. In many settings, gendered divisions of labor and product type determined who had access to what resources (Ifegbesan, Annegarn, Pendlebury and Rampe, 2016). Women have access to most resources, but not all of them. The resources that women have access to in terms of the forest, land, and animals have a lower economic value compared to those enjoyed by males (Ifegbesan et al., 2016). This has serious repercussions for their lives.

Ifegbesan *et al.*, (2016) assert that there exists a gender disparity in terms of access, utilization, and benefits derived from forest resources, particularly in rural areas. They highlighted the presence of deeply entrenched cultural norms and practices that reinforce and perpetuate gender distinctions, which have proven resistant to change over time. This situation is similarly observed in Uganda as it is in Nigeria. Though the Ugandan Government has invested heavily in formulating policies and laws that promote principles of equality and inclusion particularly of vulnerable populations in decision making, there is still lack of a mechanism that support enforcement and compliance by different government ministries and institutions; men still dominate in the forest sector partially due

to the limited number of women scientists in Uganda (Mukasa, Tibazalika, Mango and Muloki, 2012).

The Forest Conservation and Management Act of 2016 (Act No. 34 of 2016) in Kenya establishes measures to safeguard public, communal, and private forest land. This provision provides an environment where forest resources can be utilized, exploited, and managed sustainably. It is therefore the responsibility and duty of every citizen to protect and conserve forests.

1.1.1 The Ngong Hills Forest in Kajiado North Sub-County

The Kenya Forest Service (KFS) oversees Ngong Hills Metro Community Forest Association, which is responsible for the forest's administration. As stated by Kamau (2021), the Kenya Forest Service was originally established as a State Corporation under the Forest Act of 2005 (which has since been abolished). Currently, the authority of the KFS derives from the Forest Conservation and Management Act of 2016. More than 120 kinds of birds call the area's forests and eucalyptus plantations home, and the Community Association is responsible for their protection, conservation, and management. According to Machuma and Okumu (2019), the Community Forest Association's mission is to preserve biodiversity and build a self-sufficient, multipurpose reserve to meet the cultural, economic, and social requirements of neighboring communities.

The forest, situated 6 kilometers away from Nairobi, was officially gazetted in 1932 and spans an expansive area of more than 2,900 hectares. Koech (2019) states that in 1978, the forest coverage had decreased to about 3,282.04861 acres (1328.2 hectares), leaving 838.6 acres (339.4 hectares) in the hands of private developers despite the fact that it was gazetted

as a reserve through the April 30, 1932 proclamation No. 44. Furthermore, massive swathes of the forest were acquired irregularly between 1992 and 1995 (Koech, 2019).

1.2 Problem Statement

Gender equality encompasses crucial components such as access to resources, opportunities, and capabilities. This entails active participation and representation in decision-making processes, as well as ensuring equal opportunities for all genders (Muthama, 2020). It is of utmost significance for both men and women to have a voice in the management of natural resources.

Kenya has embraced various international agreements and frameworks that promote gender equality, including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Nevertheless, the representation of women in positions of power remains significantly lower than that of men (Muthama, 2020). There exists a notable gender gap in decision-making, particularly concerning the management of natural resources, such as land ownership, control of forest ecosystems, protected areas, and other valuable resources (International Renewable Energy Agency, 2019). The agency further reiterates that the exclusion of women not only undermines their autonomy but also perpetuates their marginalization, as they are unable to fully leverage the opportunities generated by economic growth as men do.

In Kenya, a few studies examined the legal challenges of enforcing gender parity in the management of forest related resources (Muthama,2020) while UN Women, UNEP and UNDP (2015) have investigated and asserted that investment in women as agents of change in natural resources management remains inadequate. The same was validated by a 2019

survey by International Renewable Energy, which spoke with women, men, and important organizations in the renewable energy industry from 140 states. Based on the findings of the study, women held 45% of managerial roles, 35% of technical positions, and 28% of professional positions within the fields of science, technology, engineering, and mathematics. In the oil and gas sector, the participation rate of women was reported at 22%. However, the International Renewable Energy Agency (2019) highlights that even conservation programs designed to restore payments for environmental services and safeguard forests and water reserves do not provide immediate benefits to women, who are often not the legal owners of the land compared to men. Consequently, this has led to a widening gender gap.

The situation seems not to be different in Ngong Hills Forest where online reading already reveals that the composition of the Community Forest Association Executive Members is made of four men against only one woman. The reading further shows that women access the different resources but are rarely involved in decision making of how the forest related resources are managed. Hence, the researches aimed to address the noted disparity in the contention that the sustainable management of forests can be effectively realized by ensuring equal access, participation, and equitable benefits for both women and men. To tease out the set objectives, the study was guided by the following research questions:

- i. What are the available resources within Ngong Hills Forest, located in Kajiado North Sub County, Kenya?
- ii. To what extent is there gendered access and participation in the management of resources within Ngong Hills Forest, Kajiado North Sub County, Kenya?

- iii. What are the challenges encountered in terms of gendered access and participation in the management of forest resources within Ngong Hills Forest, Kajiado North Sub County, Kenya?

1.3 Study Objectives

1.3.1 General Objective

Investigate the gendered (men and women) access to and participation in the management of forest-related resources within Ngong Hills Forest, located in Kajiado North Sub County, Kenya.

1.3.2 Specific Objectives

The study aimed to achieve the following specific objectives:

- i. Identify the resources present in Ngong Hills Forest, located in Kajiado North Sub County, Kenya.
- ii. Assess the extent of gendered access and participation in the management of resources within Ngong Hills Forest, Kajiado North Sub County, Kenya.
- iii. Establish the challenges associated with gendered access to and participation in the management of forest resources within Ngong Hills Forest, Kajiado North Sub County, Kenya.

1.4 Study Assumptions

The study made the following assumptions:

- i. Ngong Hills Forest contains a variety of resources.
- ii. Both women and men have equal access to forest-related resources and actively participate in the management of Ngong Hills Forest.

- iii. There are challenges regarding equal access to forest-related resources and the participation of both women and men in the management of Ngong Hills Forest.

1.5 Study Justification

The justification for this research was twofold, encompassing both policymaking and academic aspects. At the policymaking level, the research findings hold potential benefits for various stakeholders, including:

1.5.1 National and County Governments of Kajiado:

The research findings and recommendations may be valuable to the national and county governments in formulating policies that address or enhance the sustainable management of Ngong Hills Forest while incorporating a gender perspective.

1.5.2 The community of Kajiado North Sub County:

The research recommendations may help the community to consider the gender perspectives towards an inclusive community management of Ngong Hills Forest.

On the other hand, the research at the academic level may constitute an empirical study and contribute to the discussions and debate in the field of gender equality and management of natural resources.

1.6 Study Scope and Limitations

This descriptive research focused on the access and participation of both men and women in the management of Ngong Hills Forest. The study specifically concentrated on women and men residing within a five-kilometer radius of the forest in Kajiado North Sub-County, Kajiado County.

The research also included women and men who serve in the management of the forest through the existing Ngong Metro Community Forest Association. The study variables encompassed forest resources and equal access to these resources for both men and women, with a specific emphasis on equitable participation, decision-making, empowerment, and the sustainable management of these resources. Two theories—Administrative Management Theory and Social Exclusion guided the study.

The concept of time as a constraint entails the inability of the study to reach all the people who live around the forest and concentrating only on the sampled. Due to the sensitivity of the subject, the study had envisaged a possibility of encountering unwilling responses or answers that are standard and fails to reveal much in terms of the actual lived experiences and how they interact with the forest resources. Therefore, to counter the limitations, the research ensured the establishment of proper rapport and assurance of anonymity and confidentiality to all study participants. Further, the purpose for the research was clearly explained.

1.7 Definitions of Key Terms

Forest: a complex ecological system primarily characterized by the dominance of trees.

Forest Resources: encompass various components of the environment, including air, water, soil, climate, as well as the presence of rare and unique flora and fauna. These resources also include valuable assets such as wood and other forest crops. Forests serve as essential habitats for wildlife, contribute to recreation opportunities, and hold significance in terms of providing educational, artistic, and historical value to society.

Management: management and direction of efforts toward an objective. Organizational administration includes tasks including developing and implementing policy, and coordinating the actions of employees to achieve organizational goals.

Equal Access: ability of men and women to get equipped with understanding, skills, and access to information, knowledge and experience hence removing discrimination and protecting human rights.

Gender equality: state in which women and men, girls and boys, have equal rights, opportunities, and treatment, thereby achieving gender parity.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This section consists of a literature review that focuses on the research objectives. It examined both empirical and theoretical studies related to forest resources, analyzed the extent to which women and men have access to these resources and participate in forest management. Furthermore, it explored the obstacles encountered by both genders when it comes to achieving equal participation in the management of forest resources.

2.2 Forest Resources

As per the findings of the Food and Agriculture Organization (2020), global forests encompass approximately 4.06 billion hectares, accounting for around 31% of the Earth's total land area. However, it is crucial to acknowledge that their distribution is not uniform across the planet's population and geographical layout. While forests have been recognized as a focal point in the worldwide sustainable development agenda for 2030, they hold great significance for over one billion individuals worldwide by serving as a crucial source of sustenance, biofuel, and medicinal resources. Additionally, forests contribute to the provision of clean water and air, stable soil, and recreational opportunities (Food and Agriculture Organization, 2020). Further, forests related services and products contributes largely in economic growth i.e. through employment, processing and trading of forest products and energy including forest sector investments. Lastly, according to the Food and

Agriculture Organization (2020), forests play a vital role in safeguarding the topsoil, mitigating soil erosion, and preserving the fertility of land for agricultural purposes.

An estimated 1.6 billion people worldwide, including 70 million indigenous people, rely on forests for economic stability (United Nations, 2022). Eighty percent or more of the planet's animal, plant, and insect species make their homes in forests (United Nations, 2022). Local communities and indigenous peoples, who rely significantly on forest resources, were hit particularly hard by the global loss of forest lands (3.3 million hectares between 2010 and 2015) (Food and Agriculture Organization, 2020).

Koech, Njuguna, Kiama, Maua, Kaigongi, Muganda, Nadir and Kigomo (2021) explain that people from different practices and cultures do live and depend on forests. In heavily on forest and its products, they do face many challenges related to deforestation, pressure logging and also legislation granting and restricted powers. Despite the importance of protecting forests being acknowledged, many countries however, have failed to protect forest ecosystems due to population pressure hence battling with challenges like addressing the needs of the local populations (Kumar, Singh & Kerr, 2015).

According to Greenpeace (2022), in Latin America, the Amazon rainforest continues to be the largest unspoiled forest and ranks as the second largest in the world, surpassed only by Russia. Specifically, in Brazil, this forest serves as a habitat for over 24 million indigenous

individuals, representing 180 distinct groups and spans approximately 493.5 million hectares, accounting for approximately 58% of the country's total land area. Around 485 million hectares constitutes primary or otherwise naturally renewed forests, while the remaining 7.7 million hectares constitutes planted forest, mainly consisting of species that have been introduced such as Eucalyptus and Pine, Teak, Acacia and Rubber wood (TFT) to a lesser extent (Food and Agriculture Organization, 2015). In addition to its exceptional biodiversity, the Amazon forest plays a crucial role in climate change monitoring and serves as a repository for an immense amount of carbon. According to Greenpeace (2022), the forest stores approximately 100 billion metric tons of carbon, which is more than ten times the annual global emissions from fossil fuels.

A study by Grieg-Gran, Bass, Booker and Day (2015) noted that in Africa, timberland assets add to a green economy in different ways-giving wood items, producing pay and occupations, addressing needs for food, energy and restorative plants and conveying controlling and supporting environment administrations, affirming the job of backwoods in a green economy change. Nigeria possesses abundant forest resources, which contribute approximately 2.5 percent to the country's Gross Domestic Product (Food and Agriculture Organization, 2015). These resources encompass various types of forests such as plantations, woodlands, high forests, farmland, and bushland, and they provide

employment opportunities for over 2 million individuals through the supply of fuelwood and poles. Additionally, more than 80,000 people are employed in the processing of logs, particularly in the forest regions of the southern part of the country (Chudy, 2017). Despite being adequately quantified yet often underestimated, these forests offer a wide range of non-wood products and environmental benefits. These include medicinal resources, carbon sequestration, protection of watersheds, provision of bush meat, and maintenance of stable hydrological regimes (Food and Agriculture Organization, 2015).

Chudy (2017) provides a brief background of the forest industry in Tanzania where it is noted to constitute an important sector in the country that provides livelihoods to the local communities therefore contributing to the country's revenue. According to Chudy (2017), Tanzanians obtain a diversity of products such as wild meat, fodder for livestock, honey, fuel wood, sawn wood, (charcoal and firewood), medicinal plants, tannis, beeswax, fibers, gums etc. from the different types of forests. An estimated 1 cubic meter of fuelwood (charcoal and firewood) is used per person in Tanzania. This represents over 90% of the energy consumption in Tanzania (Chudy, 2017).

According to Ototo and Vlosky (2019), forests in Kenya can be classified into three categories, considering ownership and management characteristics. These categories include public forests, community forests, and trees on farmlands forests. Additionally, the

forests can be further classified based on their type and subtype. Various ecosystem products and services provided by the aforementioned three are credited with helping the economy expand. According to Ototo and Vlosky (2019), the sustainable development of many industries—including agriculture, forestry, fisheries, electricity, hotels and other tourist accommodation, public administration, and defense—depends on the regulation of more than 75 percent of the country's renewable water resources by the country's mountainous forests. Forests play a crucial role in mitigating soil erosion and provide habitat for diverse flora and fauna. Furthermore, it is believed that over 75% of Kenya's energy requirements are met by fuelwood sourced from these forests (Ototo and Vlosky, 2019).

The government of Kenya owns all public forests. Production of wood is banned by government agencies in charge of managing natural forests for environmental reasons. Nonetheless, it continues in privately held cropland plantations (Ototo and Vlosky, 2019). In consideration of the importance and benefit of these resources, Food and Agriculture Organization (2020) support that inclusive participation of local communities is key to conservation efforts, especially when this has to do with community forestry, in reference to the management of the forest by the people living near to the forest.

2.3 Level of Access and Participation by women and men

Scholars throughout the world say that despite significant progress, women's representation in positions of power and at the table of decision-making remains dismal. Men and women are built differently, yet they may have a lot in common in terms of, say, socioeconomic level, educational attainment, and professional pursuits (Okafor, and Akokuwebe, 2015). Still in the modern world, women tend to identify more with domestic life compared to men who dominate more in the decision-making platforms. According to Chowdhury (2014), the active involvement of both women and men in leadership and management is crucial for achieving and maintaining national development.

A study conducted by the International Labour Organization in 2018 examined the benefits of gender equality in the labor market, specifically in Eastern Europe and Central Asia. The research revealed that the inclusion of women in industries and professions traditionally dominated by men has significantly contributed to economic and organizational achievements. Economic development, company productivity, and competitiveness all benefit from having a more diverse group of people in positions of leadership and authority (International Labour Organization, 2018). Chowdhury (2014) conducted a study in Bangladesh to further establish that women's roles at management levels are equal to those of men. In Bangladesh, the extent of women's participation remains limited, primarily due to a combination of political barriers, social norms, cultural

beliefs and practices, inadequate legal enforcement framework, and a lack of robust institutional mechanisms (Chowdhury, 2014).

Studies have shown that despite progressive policy and legislative measures, women in South Africa continue to face discrimination at the workplace with top and senior management positions being dominated by men (Sinden, 2017). Similarly, the situation in Nigeria follows a similar pattern. Okafar and Akokuwebe (2015) affirm that women continue to face marginalization across various aspects of Nigerian society, particularly in political representation and participation. Some of the contributing factors include lack of political goodwill, lack of finance and women empowerment, religious discrimination, socio-cultural practices, illiteracy and inadequate education, stereotypical constraints among others (Okafar and Akokuwebe, 2015). According to Ochago (2017), the participation of men in coffee pest management learning groups in the Mt Elgon region of Uganda is approximately 46%, whereas women's participation stands at around 25%.

Finally, in Kenya, despite the adoption of the Country's progressive constitution and national policies that ensure gender equality in all spheres of country management, Lugaga (2015) argues that the trend is similar to those of Bangladesh, South Africa, Nigeria and Uganda with gender disparities in decision-making positions existing because of issues relating to society, culture, demography, and the economy, as well as views within

patriarchal-oriented structures. Due to women's dual roles of production and reproduction, coupled with cultural factors and patriarchy, they are limited from participating in leadership (Lugaga, 2015).

Promoting Gender Equality in Decision-making for both Men and Women

In numerous societies, the focus lies on implementing measures aimed at expediting the achievement of gender equality in decision-making. Gender equality is a pressing concern because having women represented in decision-making roles is "a component of the development and stability equation" (Profeta, 2017).

According to Profeta (2017), in order for a democratic government to operate with legitimacy, it is crucial that every citizen has an equal opportunity to engage in its affairs, as emphasized in Article 21 of the Universal Declaration of Human Rights. This inclusive participation ensures that women's perspectives are considered in policy formulation, leading to more representative, accountable, and transparent legislatures that reflect the diversity of the society.

To attain progress, democracy, equality, peace, and sustainable development in parity with men, it is crucial to integrate women's experiences and perspectives into the decision-making process (Mlambo, Kapingura, and Meissner, 2019). Research has linked the increased participation of women in politics to enhancements in economic conditions and

other domains of society (OECD, 2018). However, the truth is that women still face significant barriers to participation in and leadership of political and economic institutions (United Nations, 2015).

The United Nations' (2015) global reports back this up. According to the data, gender disparity is most pronounced and obvious in decision-making roles, where males predominate in most nations. There has been improvement over the last two decades in every area and in the vast majority of nations, but it has been sluggish, and women are still underrepresented in national parliaments. (Organization of the Islamic Conference; 2015; UN).

In order to ensure the inclusion of women's concerns and interests in policy formulation, diverse African organizations, women's groups, and individuals are collaborating at various levels, including local, regional, national, and international (Ilesanmi, 2018). The implementation of gender quota systems has proven effective in increasing the representation of women in public life in countries such as Uganda, Burundi, Namibia, Mozambique, South Africa, Tanzania, the Democratic Republic of the Congo, and Rwanda, where the proportion of women in parliament is the highest globally at 48.8% (Ilesanmi, 2018).

No significant progress has been observed in Nigeria regarding gender equality and women's political representation and participation, as revealed by empirical research conducted by Chukwurah, Nduba, and Izunwanne (2020). The study indicates that women continue to be underrepresented in politics. Factors such as the nature of elections, cultural norms, media portrayal, religious influences, institutional barriers, and financial constraints play a significant role in shaping women's political engagement and representation in Nigeria.

Similarly, despite affirmative action leading to an increase in women holding positions of power in Kenya, recent empirical research conducted by Anyango, Alupo, and Opoku (2018) titled "Women in Politics in Kenya: Analysis of Participation and Barriers" highlights that the gender bias still persists within the Kenyan state (Association of Media Women in Kenya, 2014). While women's contributions to governance are acknowledged, the study found that respondents rarely, if ever, voted for women candidates in public office.

Men and Women Empowerment

The notion of emancipation is frequently perceived as abstract and challenging to comprehend. However, in various fields such as social work, administration, public health, psychology, political sociology, and economics, it has gained significant traction in recent

years, yielding positive outcomes in terms of both academic advancement and societal significance (Cavalieri and Almeida, 2018).

The phrase has been used extensively within the realm of social mediation, and its meaning now include its extension into other domains of knowledge. The importance of this has to be put into perspective. Keeping in mind the various collective arrangements and the contexts in which they exist, it should seek to foster a community in which its constituent members exercise more agency and democratic participation in day-to-day affairs (Cavalieri and Almeida, 2018).

The Universal Declaration of Human Rights (1948), the Convention on the Elimination of All Forms of Discrimination against Women (1979), and the Beijing Platform for Action (1995) emphasize that attaining gender equality requires a fundamental transformation away from traditional patriarchal power dynamics and toward fostering equitable relationships between women and men. The ultimate aim is for men, women, and children of all sexes to coexist in a world where they are heard, free to act in accordance with their own values, respected, and able to make their own decisions, all of which contribute to greater equality and democracy (United Nations Economic and Social Commission for Asia and the Pacific, 2015).

Despite the fact that women continuously outperform men in terms of education, Branchi and Penteadó's (2020) Brazilian study revealed that women still make up an "alarmingly low percentage in political representation," with no more than 30% of MPs being female. Women do poorly in terms of economic engagement as well; even at their maximum level of workforce involvement, they only manage 64 percent of men's 67 percent. Despite significant educational gains over the last several decades, Brazilian women still face significant barriers to achieving economic and political parity (Branchi and Penteadó, 2020).

Research by Bhadauria, Singh, Paliwal (2017) found that "there are still anomalies in countries like Bhutan and Bangladesh with least women empowerment Index," hence the situation is not dissimilar in any South Asian nations. The improved position of women's empowerment in countries like Sri Lanka and the Maldives is a direct result of their gender-sensitive policies. Both Bhutan and Bangladesh are towards the bottom of the Women's Empowerment Index.

Crookston, West, Davis, Hall, Seymour, and Gray (2021) found that the percentage of people in the treatment group who aspired to gain empowerment increased significantly from baseline to posttreatment for males, but not for women. Finally, at the finish line, the women in the control group felt more empowered than the men. Gender parity among

women was high from the start in both groups, and it increased somewhat towards the end. With regards to domestic abuse awareness, financial autonomy, and work-life balance, males were more likely to report feeling empowered than women. Conversely, females were found to be more inclined than males in reporting a sense of empowerment regarding their ability to make significant contributions to society through their involvement in productive organizations and their capacity to exert influence within these groups (Crookston et al., 2021).

To provide further details, Mitullah (2017) reported that 56% of Kenyan individuals perceive an improvement in women's access to opportunities and their treatment in both the workplace and society as important. Furthermore, individuals, both men and women, with higher levels of education are more inclined to acknowledge advancements towards gender equality compared to those with lower levels of education. According to the same research, although the vast majority of people in a given country may feel that women have the same rights to economic and professional advancement as men, fewer would make similar claim about women's access to property ownership and inheritance. In fact, 80% of women believe they should have this right, while just 60% of males do (Mitullah, 2017).

Despite the importance of the accomplishments and goals achieved, this evaluation underscores the need to reform patriarchy and unfavorable gender practices and norms to

effectively address the remaining challenge. Kenya must make the most of current chances and look into other methods for addressing the persistent barriers to achieving gender parity in the country's political, social, and economic spheres (Ministry of Public Affairs, Youth and Gender, 2019).

FAO (2015) highlights the scarcity of gender-specific data within the forestry sector and the limited suitability of country studies for cross-national comparisons. The organization further emphasizes that initiatives and policies that promote women's participation in the forest industry have beneficial effects on food security, nutrition, and the sustainable management of forests. Facilitating women's involvement in groups of forest users, increasing their access to contemporary energy sources, and improving their access to processing methods and markets have all been proven to significantly improve the lives of individuals who rely on the forest.

Additionally, FAO (2015) concludes and acknowledges that integrating gender into policy processes can enhance both environmental and developmental outcomes; policies and programs that empower women in the forest sector are a crucial prerequisite for creating economies based on social justice and environmental preservation.

2.4 Challenges Facing Gendered Access and Participation in Management of Forest Resources

According to the Food and Agriculture Organization of the United Nations (2015), gender roles in forestry and agroforestry differ between males and females in impoverished nations. Various cultural, social, economic, and institutional factors collaborate to restrict women's involvement in forest management, their influence over forest resources, and their access to economic opportunities. Nonetheless, FAO reports that there is a noticeable disparity between men and women in the utilization of forest resources, highlighting their distinct responsibilities in the forestry industry. The study reveals that women's utilization and management of forests are more intricate compared to men.

The same is true in terms of gender roles and duties in forests, as observed in a draft article by Kristjanson et al. (2019). Despite women's growing visibility as agents of change and eco-friendly managers with the power to shape the solutions, there are still many gender disparities that must be closed. Gender inequality may be broken down into its component parts, each of which corresponds to a unique set of obstacles that must be overcome if we are ever to achieve true gender parity. These factors are contextual (that is, they are not prevalent everywhere), and some particular instances of each are provided for illustrative reasons; in actuality, males may also encounter comparable obstacles.

Examination of the local context indicates that women in sub-Saharan Africa have a crucial role in the management of forests, which is indispensable for the sustenance of households, families, and economies. Although they use the same natural resources, they are routinely left out of the decision-making process (Onzere et al., 2020). 'Conventional reasons favor male leadership, lack of time, and restrictive societal conventions continue to impede women's capacity to participate significantly in forest governance,' write Onzere, El Well, Carr, Caron, and Bebbington (2020) about Liberia. Furthermore, women belonging to lower socioeconomic backgrounds already face disadvantages in forest governance. Their limited availability of time and resources to actively engage exacerbates this issue and undermines the capacity of forest user groups to make well-informed decisions.

Similar results are shown in a study of forest communities in Nigeria by Eneji, Mubi, Husain, and Ogar (2015), who found that although both men and women actively utilize forest resources, they seldom take on equal roles in resource management. Socio-cultural norms and traditional belief systems have a notable influence on women's involvement in the management of forest resources, particularly in societies dominated by men.

In particular, a research by Ruto (2016) focuses on Kenya, where she identifies cultural, religious, and legislative gaps as important reasons challenging women's engagement in forest resource management. Culture was shown to have a significant impact on societal

responsibility sharing, and by extension, responsibility sharing within forest user groups. Fewer women are promoted to positions of leadership in these forest user organizations, where their voices are muted. Men, on the other hand, hold a disproportionate number of jobs, including the most influential ones, and thus make the vast majority of forest management and environmental policy choices. The distribution of business openings is also heavily influenced by cultural norms. For example, in the Chepalungu constituency, where guards from the Kenya Forest Services are stationed, males make up about 80% of the workforce while women make up the remaining 20%. Furthermore, women are underrepresented in the agency's upper echelons, and they are seldom offered the opportunity to participate in forest patrols due to the widespread belief that they are inherently incapable of handling the risks involved.

Moreover, the same research found that religion is a major barrier to women's involvement in forest resource management. According to the study's authors, "religiously and culturally, males are expected to be the leaders of the households and women are meant to follow men in all areas, and this is true for contemporary and traditional faiths." This is seen in the distribution of leadership roles in houses of worship and in the division of labor in the workplace. A lack of female forest guards may be attributable to the cultural norm that women should serve as housekeepers rather than pursue careers that would take them away from their families. Religion also enforces strict gender norms, wherein women are

expected to fulfill domestic responsibilities and care for children, while men are assigned the role of providing for the household and engaging in physical labor. Men typically use "heavy" forest products like logs for sale, timber for building, and posts and sticks for fencing, while women tend to use "light" forest products like firewood for cooking, fruits and berries to supplement the family diet, and medicinal herbs and leaves to treat ailments in the family (Ruto, 2016).

Lastly, the aforementioned research indicates that laws can serve as an obstacle to women's involvement in forest conservation and management. Neither federal nor state law gives women the legal right or authority to lead conservation and management operations. Although these regulations recognize women's contributions to conservation, their execution is their weakest link. Therefore, the legislation's noble intentions stay on paper but provide no real benefits to women. Last but not least, another flaw in these regulations is that women have a negligible voice in the legislation that affects them (Ruto, 2016).

Sustainable Management of Natural Resources

Our health, happiness, and standard of living are all supported by the natural world and its ecosystems. The power our factories, provide us with food and water, and generate economic growth. To create growth and prosperity, natural resources are seen as essential. There is mounting evidence that both these natural resources and the ecological services

they support are in decline. Pollution, habitat loss, rising temperatures, and over-exploitation are just some of the stresses they face (OGL, 2018). Utilization of resources has grown as a result of time and industrialization. There were cases when the pace of resource depletion exceeded the rate at which it could be replenished. Finally, such overexploitation endangered ecosystem health and the livelihoods and well-being of those who rely on these resources (Bansard and Schröder, 2021).

In order for the present and future generations to benefit from these advantages, it is imperative to cultivate resilient ecosystems and sustainable natural resources. To ensure our economic, social, environmental, and cultural well-being, solutions need to be implemented across all four pillars of sustainable development. This approach, known as the "sustainable management of natural resources" (OGL, 2018), is vital for our long-term prosperity.

The central concern lies in how concepts such as property and rights impact individuals' capacity to utilize, derive benefits from, participate in decision-making, and assume responsibility for natural resources. Law and policy must often strike a balance between "competing" rights and interests due to the inherent complexity of the underlying architectural dynamic of forces in nature, which frequently relies on customary practices.

The long-term viability of resource governance is compromised by the complexity of most organizational structures, which typically have overlapping or even antagonistic systems.

In matters of gender, there is a prevailing bias in favor of more dominant groups. Inequalities in tenure security, ownership, and access to resources are a result of historical legacies and decision-making patterns (Oxfam, 2015). Despite being disproportionately impacted, women, rural communities, and Indigenous Peoples are often portrayed as passive beneficiaries of policy changes rather than holders of rights and key stakeholders in the sustainable management of natural resources.

The responsibility for balancing rights and interests primarily lies with states. Regulations governing the extractive industry determine how a corporation's exclusive user rights may affect the general public's right to a safe and healthy environment. The distribution, recognition, and protection of rights, as well as the enforcement of associated obligations, vary across different governments and evolve over time (Bansard and Schröder, 2021).

Sustainable forest resource governance relies on open and transparent decision-making processes. Gender norms have altered not just the ways in which resources are distributed and used, but also how we act and what we know, with women possessing special agro-ecological knowledge in regards to crop resilience and nutrition. Hence, if decision-making processes are not gender-responsive and inclusive, there is a risk of overlooking women's

specific needs and responsibilities, as well as failing to ensure the integration of vital ecological information necessary for enabling sustainable practices (UN Women, 2018).

2.5 Theoretical Framework

According to Adom, Joe, and Hussein (2018), a theoretical framework, which is often adopted by researchers to shape their research inquiries, serves as a blueprint and inadvertently becomes the foundation of the study. Additionally, Ravitch and Carl (2016) suggest that a theoretical framework assists researchers in placing and contextualizing formal ideas within their investigations, providing guidance throughout the research process. Two theories, administrative management theory and social exclusion theory, will serve as the theoretical anchors for the study. Each of the tenets is analyzed in this part, including their applicability to the research, potential drawbacks, and strengths.

2.5.1 Administrative Management Theory

Fayol (1841-1925) is widely regarded as the founder of Administrative Management Theory, also known as Process Theory or Structural Theory. According to Fayol (1916), the essence of management involves forecasting and planning, organizing, establishing order, coordinating, and monitoring. This proposes 14 guiding principles, including "division of labor," Unanimity of command, Unified Field Theory, Compensation, levels of authority, centralization, and decentralization, individualism vs. collectivism, chain of

command, fairness, security in one's position, innovation, and team spirit (Achinivu, 2017).

This theory, which is an improvement over Taylor's, is based on "how the management should engage with the workforce" and "provides a comprehensive and analytical framework of the process of administration." (Kullabs, 2022).

The theory examines the functioning and management of organizations, advocating for a formalized administrative structure, a well-defined division of labor, and the delegation of power and authority to administrators based on their respective areas of responsibility. It remains relevant and dependable, having been adopted by both public and private organizations (Grimsley, 2021).

Strength of the Theory

The field of administrative management theory is extensive in its coverage of management strategies. Additionally, it is the most popular since its efficacy has been established. Everything a manager might possibly do in order to attain their goals is included, making this statement very exhaustive (PhDEssay, 2016).

Weakness of the theory

However, the theory has limitations, such as its reliance on humans even if gender equality is not considered in the management of forest resources (such as ecosystem and biodiversity management). We are fallible beings; therefore, blunders are inevitable. This

idea relies on group cohesion and unity to provide effective management, yet in the name of equality, women are routinely barred from these top-level positions. For the sustainable management of forest resources, it is crucial for all stakeholders, irrespective of gender, to actively participate in all five aspects of management. There might be further complications if the dishonest individual refuses to accept responsibility for their actions. Given the inherent limitations of people, such as differences in personality and the inevitable occurrence of error, this is a flaw shared by all human-controlled systems (PhDEssay, 2016).

Whether or not the fourteen principles of administrative administration are used from a gender perspective in the management of Ngong Hills Forest is an important question that may be better answered with the help of the theory. In other words, the theory can be valuable in examining the gendered aspects of the administration of Ngong Hills Forest, encompassing its formalized administrative structure, division of labor, and allocation of power and authority.

2.5.2 The Theory of Social Exclusion

The term 'social isolation' was initially attributed to Frenchman René Lenoir, while Brian Barry's book *Social Exclusion, Social Isolation and the Distribution of Income* (Barry, 2002) significantly contributed to our understanding of social exclusion. The concept of social exclusion elucidates how the deprivation of resources and opportunities results in

marginalized groups having limited power. Consequently, men and women who face discrimination within their own communities are less likely to benefit from local forest resources. This hypothesis sheds light on the challenges faced by individuals in society when they encounter barriers that impede their equal participation in the sustainable management of forest resources. The Social Exclusion Unit (SEU), established during the Blair administration in the United Kingdom, has utilized this idea since 1997 to develop policy strategies aimed at combating social exclusion (Stanley, 2007).

Strength of the Theory

The concept of social exclusion proves particularly valuable when approached from multiple perspectives. It's not just about not having enough money; it also has to do with not having enough say in important decisions or enough influence over their own lives. That is to say, rather than only concentrating on one of its outcomes, the theory of social exclusion seeks to reflect the nuances of helplessness in contemporary society (Muddiman, 2000). Adopting a holistic perspective, the theory can be employed in three distinct contexts: 1) situations where exclusions result in paths of stratification or impoverishment without immediate poverty outcomes; 2) situations where the upward mobility of the impoverished is hindered by exclusions that occur within non-poor segments; and 3) situations where inequality gives rise to conflict (Fischer, 2011).

Weaknesses of the Theory

Critics argue that the theory of social exclusion, by defining it solely as the state of being excluded rather than addressing the underlying processes, is overly focused on outcomes and lacks a connection to the processes that give rise to the issues outlined in its definition (Percy-Smith, 2000). Do not use the term as if it were a meaningless word, a trendy way of avoiding talking about something as unappealing as poverty (O'Connell in Kilmurray, 1995). Any attempt to address issues of social exclusion that only adopts the phrase but fails to do so in practice will fail in the long run. According to him, a policy that is both all-encompassing and largely unimportant may replace answers that are formed and developed at the local level (Kilmurray, 1995).

Another criticism directed at the concept of social exclusion is the "underlying moral meta-narrative" presented by Hickey and du Toit (2007). They argue that social inclusion or integration, seen as the opposite of social exclusion, is inherently desirable and significant, raising concerns about the underlying moral assumptions associated with the idea of social exclusion. Therefore, latent normative expectations about the structure of social life may frequently guide attempts to combat exclusion. However, this overlooks the fact that the inclusion's parameters may be problematic, disempowering, or otherwise unequal.

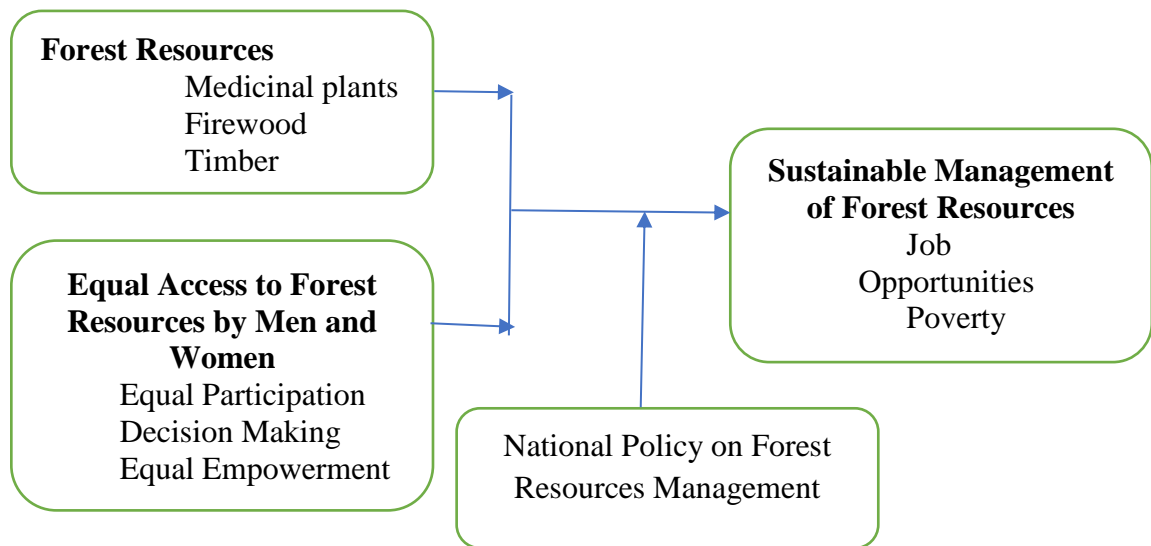
Relevance of the Theory

To determine whether men or women face greater barriers to using and controlling forest resources in Ngong Hills, this idea has been crucial in the inquiry. In other words, the theory of social exclusion does shed light on the obstacles that prevent men and women from equally contributing to the sustainable management of forest resources in Ngong Hills Forest. In addition, the reasons and challenges discovered have the potential to guide the implementation of an inclusive strategy that can enable and equip both men and women to manage the Ngong Hills Forest's resources.

2.6 Conceptual Framework

According to Ravitch and Riggan (2011), conceptual frameworks can be represented either through written or visual means, providing a graphical or narrative depiction of the study's topics, key ideas, variables, and the presumed connections among them. It helps with comprehension of the bigger picture and determining where to concentrate your efforts in a research endeavor. Since this is the case, a well-thought-out conceptual framework has been useful for gauging the study's aims, as well as for generating appropriate research questions and methodology (Magher, 2018). In the study, two variables were considered independent: the availability of forest resources and the extent to which men and women possess equitable access to those resources. The interaction between these two factors enables a better understanding of sustainable forest management.

The study encompassed forest resources such as medicinal plants, fuel, and lumber. In examining equal access to resources, it explored factors such as equal engagement, involvement in decision-making, and empowerment for both men and women. Additionally, sustainable management, as depicted in Figure 2.1, considered dependent variables such as employment opportunities, poverty reduction, and equitable benefits.



Independent variables
variable

Moderating Variable

Dependent

Figure 2.1. Conceptual framework (Source: Author, 2022)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section presents the approach employed to examine the extent to which men and women have equal opportunities to engage in the management of forest resources in the Ngong Hills Forest, located in Kajiado County. The research was conducted within the boundaries of Kajiado County. Comprehensive information regarding the study's context, methodology, population, analytical unit, sample size, and sampling methods is provided. The data collection methods, data processing procedures, and data analysis techniques are described in detail. The section concludes with a discussion of ethical considerations.

3.2 Research Site

The study primarily focused on Kajiado North Sub-County, where a significant portion of the forest is located. This region was selected due to the active involvement of local residents in both the work and preservation of the forest. The Ngong Hills Metro Community Forest Association, established under the Forest Act of 2005 (now repealed), derives its mission from the Forest Conservation and Management Act (FCMA) of 2016. This state corporation is responsible for safeguarding, conserving, and managing the forest, which consists of more than 80% native trees and a small portion of eucalyptus plantations sourced from other countries (Kamau, 2021).

It's about 6 km from Nairobi's downtown. More than 2,900 acres were included in the original 1932 gazette. Since the railroad was such a vital mode of transportation in those days, all of the wood and wood products, including fuel, came from this forest. In 1978, the forest covered about 3,282.04861 acres (1328.2 hectares). The land saw 838.6 acres (339.4 hectares) in the hands of individuals and private developers, notwithstanding the

fact that it was gazetted as a reserve through proclamation No. 44 of April 30, 1932. Between 1992 and 1995, huge swathes of the forest were acquired illegally (Koech, 2019). The Ngong Hills Forest is home to a diverse range of wildlife, including over 35 mammal species and numerous insects, bird, amphibian, and fish species. The overarching objective of the Trust is to safeguard the natural environment and establish a self-sustaining reserve that caters to the cultural, recreational, and economic needs of the surrounding communities, among other purposes (Machuma and Okumu, 2019).

3.3 Research Design

To gather comprehensive data, the research employed a descriptive survey design that incorporated both qualitative and quantitative approaches. The primary objective was to identify forest-related resources and investigate the challenges associated with gendered access and participation in the management of these resources in Ngong Hills Forest, specifically in Kajiado North Sub County. The descriptive survey design was chosen for its ability to provide a detailed description of individuals' characteristics and their experiences regarding access and participation in the management of forest-related resources. This design offers flexibility and allows for generalization of findings.

Multiple data collection methods were utilized in this study. A questionnaire survey, key informant interviews and focus group discussions were employed to gather primary data. These methods facilitated direct engagement with participants and enabled a comprehensive understanding of their perspectives. Additionally, a review of existing literature was conducted to gather secondary data. This analysis of secondary data played a vital role in corroborating or challenging the conclusions drawn from the primary data.

3.4 Study Population and Unit of Analysis

The study focused on women and men residing in the vicinity of Ngong Hills Forest within an approximate radius of 5 km. Simple random and Purposive sampling were employed to select individuals from this population. The unit of analysis for this study was individual women and men residing within a radius of approximately 5 km from the forest area.

3.5 Sample Size and Sampling procedure

The sample size calculation for this study was based on the Fisher's formula, which has been commonly used in previous studies such as those conducted by Georgiadis, Johnson, and Gardner (2005) and Fostgate (2005). This formula was employed to determine an appropriate sample size for the current research.

$$n = \frac{Z^2 * p * (1-p)}{d^2}$$

Where:

n=Size of the Sample

Z=Normal distribution Z value score, (1.00)

p=Proportion of units in the size of the sample where it is set at 50% (0.5)

d=Precision level desired which is 0.1 for the study

$$n = \frac{(1.00)^2 * (0.5) * (0.5)}{(0.1)^2} = 100$$

The study aimed to survey a total of 100 residents (50 females and 50 males) residing in the immediate vicinity of the forest. The selection of participants was conducted using a combination of random and purposive sampling techniques. Out of the targeted sample, 92 individuals (44 females and 48 males) responded to the survey.

The researcher together with two research assistants and in company of the chairman of Ngong Metro Community Forest Association visited the area in order to randomly identify women and men who were asked to respond to the questionnaire through self-administration. Eighty (80) filled questionnaires were collected immediately after while twelve were dropped at the chairman's resident after which they were picked by the research assistants.

Ten key informants (KIIs) were selected for in-depth interviews using the purposive sampling technique. The selection of these key informants was based on their individual expertise and knowledge relevant to the study topic. Using the same purposive techniques, four (4) focus group discussions (FGDs) were identified in consideration of homogenous composition (gender). The research organized four FGDs made of six to twelve participants each, for men, women, youth male and youth female respectively.

3.6 Data Collection Methods

The study employed a hybrid approach, combining qualitative and quantitative data collection methods from various sources. To collect primary data, a survey questionnaire was utilized for quantitative data, while qualitative data was obtained through the use of a Key Informant interview guide and a Focus Group Discussion (FGD) interview guide. Secondary data, on the other hand, was gathered from books, papers, and online resources rather than directly from the respondents.

3.6.1 Questionnaire Survey

A survey questionnaire (see Appendix II) was developed and implemented to collect the main quantitative data for the study. A total of 100 questionnaires were distributed, ensuring an equal representation of both males and females, with 50 participants from each

group. Two trained research assistants were employed to assist with the data collection process, familiarizing themselves with the study objectives and the chosen approach.

The questionnaire was semi-structured and designed to address the three study objectives. The respondents were encouraged to express their opinions freely through open-ended questions, without any coercion to provide specific responses.

3.6.2 Key Informant Interviews (KIIs)

In order to gather primary qualitative data that would complement the information obtained through the questionnaire survey, FGD guide, and literature review, in-depth interviews were conducted. The objective of these interviews was to gain a deeper understanding of the gendered access to and participation in the management of Ngong Hills forest-related resources. Open-ended questions were used to collect the data, and the researcher probed further to explore the nuances of the topic. A total of 10 key informants were selected through purposive sampling.

The distribution of interviews was as follows: two from the Kenya Forest Service office at the national level, two from the department of forestry at the county level, two executive members (one male and one female) of the Community Forest Association, and two women and two men from the local community. The interviews provided valuable insights into the various resources and shed light on the challenges related to gendered access and participation in forest resource management. The data collection process employed a key informant interview guide (see Appendix III).

3.6.3 Focus Group Discussion (FGD) Guide

The final data collection instrument used in this study was the Focus Group Discussion (FGD) guide (refer to Appendix IV). This guide served as a valuable tool for collecting primary qualitative data, complementing the information gathered through interviews, as well as capturing additional insights to supplement the quantitative data obtained from the survey questionnaires. The FGDs provided an opportunity for group discussions that enriched the understanding of the research topic and allowed for a comprehensive exploration of the participants' perspectives.

The research conducted a total of four FGDs, with each group consisting of eight participants. The FGDs were organized separately for men, women, youth males, and youth females. The youths were those aged 18-25 years while the men and women were aged 26+ years.

3.7 Data Processing and Analysis

The quantitative data was carefully entered into SPSS Version 26 and checked for consistency after undergoing a thorough cleaning process. Descriptive statistics, such as frequency distributions, averages, and percentage breakdowns, were then employed to present the computed results.

Regarding the qualitative data, recordings from the key informant interviews and focus group discussions were translated and transcribed verbatim. The transcripts were meticulously reviewed for accuracy and subsequently organized based on commonalities and differences. Thematic analysis was then conducted to examine the data in relation to the study's objectives, ensuring triangulation of findings. The analysis process was guided

by the research questions. To effectively capture the perspectives of the participants, direct quotes from the interviews have been included in the presentation of the findings.

3.8 Ethical Considerations

The researcher was highly conscious of ethical considerations and adhered to ethical principles throughout the study. Prior to commencing the fieldwork, the researcher successfully defended the research proposal at the university and obtained research permission from the National Commission for Science, Technology, and Innovation (NACOSTI) under the Ministry of Education, Science, and Technology. In order to ensure informed consent, the purpose of the study, potential outcomes, and any risks were thoroughly explained to the respondents. Only after providing their informed verbal consent were the respondents engaged in the study.

Data confidentiality was strictly maintained to protect the privacy of the participants. The collected data was not shared with any external parties, and measures were taken to securely store the recorded audio to prevent unauthorized access. As a master's student at the University of Nairobi, the researcher ensured that the results would be utilized solely for academic purposes as originally intended. Participants were given the freedom to withdraw from the research at any point without facing any consequences, as guaranteed by the informed consent process.

To uphold the principle of confidentiality, the collected data was treated with utmost care and not shared with individuals outside the study team. In compliance with the principle of dissemination, the final project report will be made available for reference at both the University of Nairobi Library and the Kenya Forest Research Institute Library.

CHAPTER FOUR: ANALYSIS, PRESENTATION AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter encompasses the fulfillment of the research objectives, incorporating the presentation, interpretation, and discussion of the findings. To commence, the chapter outlines the response rate, followed by a concise overview of the demographic information provided by the respondents. Subsequently, it delves into the findings and their corresponding interpretations, aligning them with each objective of the study. Finally, a discussion of the research findings is presented.

4.2 Response Rate

The study aimed to gather data from 100 respondents, and out of the targeted group, 92 individuals actively participated, resulting in a response rate of 92%. A small proportion of 8% of the respondents did not partake in the study. According to Bryman and Bell (2014), a response rate of 50% is considered adequate, 60% is acceptable, and a response rate of 70% or higher is deemed outstanding. Therefore, the level of participation in this research can be regarded as remarkably high.

The study employed a purposive sampling method to identify and select 10 Key Informant Interviews (KIIs) who willingly responded to the interview. These 10 KIIs included two representatives from the Kenya Forest Service office at the national level, two representatives from the department of forestry at the County level, two executive members (one male and one female) of the Community Forest Association, and two women and two men from within the community. Additionally, the research organized four Focus Group Discussions (FGDs) consisting of six to twelve participants each. The FGDs were

categorized into men, women, male youth, and female youth. Confidentiality of the respondents was strictly maintained through the use of coding.

4.3 Demographic Characteristics

In this section, the findings pertaining to the demographic characteristics of the respondents are presented. These characteristics encompass the respondents' sex, age, marital status, and level of education. The findings related to these demographic aspects are presented in the subsequent subsections.

4.3.1 Sex of the Respondents

The respondents were asked to specify their sex. The corresponding findings are presented in Table 4.1.

Table 4.1. Sex of the Respondents

Sex	Frequency	Percentage (%)
Male	48	52.2
Female	44	47.8
Total	92	100

Source: Field Data (2022)

Based on the findings, the majority of respondents (52.2%) identified as male, while 47.8% identified as female. This indicates a slight difference in gender distribution, with a higher representation of male respondents.

4.3.2 Age of the Respondents

The study aimed to determine the age distribution of the respondents using specific age brackets. The corresponding findings are presented in Table 4.2.

Table 4.2. Age of the Respondents

Age Bracket	Frequency	Percent (%)
20 - 30	25	27.2
30 - 40	31	33.7
40 and above	36	39.1
Total	92	100

Source: Field Data (2022)

Based on the findings, the majority of respondents (39.1%) fell into the age bracket of 40 years and above. Additionally, 33.7% of the respondents were in the age range of 30-40 years, while 27.2% were in the age range of 20-30 years. This indicates that a significant proportion of the respondents were 30 years and above, suggesting that they had valuable experience and could provide reliable information related to the study subject.

4.3.3 Marital Status

The respondents were asked to provide their marital status. The corresponding findings are presented in Table 4.3.

Table 4.3. Marital Status of the Respondent

Family Status	Frequency	Percent
Single	27	29.3%
Married	56	60.9%
Divorced	2	2.2%
Widow	7	7.6%
Total	92	100

Based on the findings, the majority of respondents (60.9%) reported being married, while 29.3% indicated being single. Additionally, 7.6% of the respondents identified as widows, and 2.2% reported being divorced. This indicates that a significant proportion of the respondents were married, suggesting that they could provide valuable insights into the equal rights of participation between women and men in the management of forest resources.

4.3.4 Level of Education

The respondents were asked to specify their level of education. The corresponding findings are presented in Table 4.4.

Table 4.4. Respondent Level of Education

Level of Education	Frequency	Percent
Primary	10	11.2
Secondary	36	39.3
College	22	23.6
University	23	24.7
No formal education	1	1.1
Total	92	100

Source: Field Data (2022)

Based on the findings, the majority of respondents (39.3%) reported having attained secondary education. Additionally, 24.7% of the respondents had attained a university level education, 23.6% had a college level education, 11.2% had completed primary education, and 1.1% had no form of formal schooling. These findings indicate that a significant

proportion of the respondents had obtained O-level education or its equivalent, suggesting that they possess valuable insights and knowledge related to the subject of the study.

4.4. Resources that Exist in Ngong Hills Forest

The initial objective of the study aimed to identify the resources present in Ngong Hills Forest, specifically within Kajiado North Sub County, Kenya. The findings related to this objective are presented in the subsequent subsections.

4.4.1 Length of living around Ngong Hills Forest

The study aimed to determine the duration of time the respondents had been residing in the vicinity of Ngong Hills Forest. The respondents were asked to indicate the length of time they had been living near Ngong Hills Forest. The corresponding findings are presented in Table 4.5.

Table 4.5. Length of living around Ngong Hills Forest

Duration of time	Frequency	Percent
1 years	2	2.2%
2 years	2	2.2%
3 years	11	12%
More than 5 years	77	83.6%
Total	92	100

Source: Field Data (2022)

Based on the findings, the majority of respondents (83.6%) reported residing near Ngong Hills Forest for more than 5 years. Additionally, 12% of the respondents indicated a duration of 3 years, while 2.2% mentioned residing for 2 years and 1 year, respectively.

These findings indicate that a significant proportion of the respondents have been living in close proximity to Ngong Hills Forest for more than 5 years and can therefore, authoritatively comment on their interactions with the forest resources.

4.4.2 Resources that exist in Ngong Hills Forest

The respondents were asked whether they were aware of the existing resources within the forest. The corresponding findings are presented in Table 4.6.

Table 4.6. Resources that exist in Ngong Hills Forest

Knowledge on resources	Frequency	Percent
I do not know anything	1	1.1
Yes, I know some	67	72.8
Yes, I know all resources	23	25
I am not sure	1	1.1
Total	92	100

Source: Field Data (2022)

Based on the findings, the majority of respondents (72.8%) expressed awareness of some resources that exist in Ngong Hills Forest. Additionally, 25% of the respondents claimed to know all the resources present in Ngong Hills Forest, while 1.1% indicated uncertainty or lack of knowledge about the forest resources. This indicates that a significant proportion of the respondents were familiar with the resources found in Ngong Hills Forest.

Furthermore, during the interviews with key informants, all participants mentioned various resources that exist in Ngong Hills Forest.

One of the County Officials said:

“Firewood, people also get soil for planting flowers because we are in urban environment. They also use the forest for bee keeping to enhance their livelihood and sustain themselves. Since the majority of the residents here are pastoralists, they use the forest for grazing their animals.”

A female respondent from Ngong Metro Community Forest Association said:

“.... The resources are many, there is firewood, grazing land, medicine because of herbal, trails, tree nursery, rock climbing.”

The same question leading to the identification of the existing resources was posed in all the focus group discussions. All respondents mentioned that some of the resources include firewood, medicinal plants, fruits, timber though stating that there is a government moratorium in place that bars residents from harvesting the resource from the forest, land for grazing and also land for farming. The forest also provides land for bee keeping. The hills found in the forest serve as a tourist attraction site which is seen as one of the resources that promote eco-tourism.

“The forest provides us with so many things among them the firewood, grazing land for our animals, shade for relaxing in the hot sun, medicinal herbs for treating various ailments, land for agriculture and for bee keeping, construction timber among others” (Men’s FGD)

4.4.3 Livelihood Dependence on Ngong Hills forest resources

The study explored whether the livelihood of the respondents depended on the resources derived from the forest. The respondents were asked about the extent to which their livelihoods relied on these resources. The corresponding findings are presented in Table 4.7.

Table 4.7. Livelihood Dependence on Ngong Hills Forest resources

Livelihood Dependence	Frequency	Percent
Yes, very much	21	22.8%
Yes	35	38%
Sort of	12	13%
Not much	19	20.7%
Not at all	5	5.5%
Total	92	100

Source: Field Data (2022)

Based on the findings, the majority of respondents (60.8%) indicated that their livelihoods were dependent on the resources derived from the forest. This depicts that the respondent's living near Ngong hills forest depend on some of the identified resources for their livelihood. According to the FGDs, the community benefits from the resources, because they get firewood (which is used in their day to day lives) and medicinal herbs which majority of the elderly women were said to have great knowledge about. The participants added that women especially gather the herbs and sell them in Ngong market. The Pastoralists on the other hand are able to take their cattle for grazing.

“The forest resources are immense and most people depend on them. We mostly love taking herbal concoctions that treat practically most ailments. There are renowned herbalists here who are specialists in treating human beings as well as animals. In a way, our livelihood is closely connected to the forest” (Women's FGD).

4.4.4 Importance of Ngong Hills Forest resources

The respondents were asked to indicate the level of importance of forest resources to themselves, the community, and the county. The corresponding findings are presented in Table 4.8.

Table 4.8. Importance of Ngong Hills Forest resources

Level of Importance	Frequency	Percent
To a greater extent	42	45.7%
To a great extent	28	30.4%
To some extent	20	21.7%
Not important at all	2	2.2%
Total	92	100

Source: Field Data (2022)

Based on the findings, a majority of the respondents (76.1%) recognized the significant importance of Ngong Hills forest resources to themselves, the community, and the county to a great extent. This can be attributed to the active involvement of the Ngong Metro Community Forest Association, which has a substantial membership comprising residents living near the forest. Furthermore, the association has successfully developed a forest management plan in collaboration with the government, enabling the community to access and benefit from the available resources.

Asked how important Ngong Hills forest resources are to the community and county at large. All of the key informants noted that the resources have contributed to the change of people's livelihood, health and economic status. The following are some of the verbatim quotes from the informants:

“Yes, like grazing, there is enough food for cattle and sheep although since it is not controlled. The forest is not fenced and any pastoralist is free to graze their livestock. In addition, they get firewood for their daily cooking.”

“...We have the forest officers as well as wardens who are supposed to patrol. We however, do not see them often. The ones who engage in conservation mostly are

the CFA members, I am one of them. We engage in tree planting, practice ecotourism, collect firewood, get rain water and undertake cultural and traditional ceremonies within the forest ecosystem. Mostly we plant trees and would not want anyone to cut them.”

“.... It is because of the resources. The forest itself is a resource, the community goes there to graze, to collect firewood and they also do beekeeping, they collect herbal medicine, besides the good climate that the community enjoys. Not that we have exploited the forest the way we would like, its potential remains immense but we have not yet arrived there because of our limited capacity. The community needs to be empowered on how they can benefit from those resources.”

“.... Not really! Unless you have access in the forest and would benefit. The government should have a formula for resource sharing so that the community can benefit. In Ololua forest there is a research department and from their work there are resources that they get. If the government can have a revenue sharing formula or module, the community can benefit more. On the other side we have the railways which passes through the Ngong Hills forest. There are definitely revenues that is obtained from it but the community is not benefiting from it. We urge the government to fast track the benefit sharing bills so that the community can begin benefitting and enhancing their protection of the ecosystem.”

According to the FGDs, Ngong hills forest provides fresh air to the residents and locals also benefit from the eco-tourism through the visitors that hike the forest. The forest is also important as it serves as a source to a river (Athi River) which in turn provide water to the community

4.5 Level of Gendered Access and Participation in Management

The second objective of the study aimed to evaluate the extent of gendered access and participation in the management of resources within Ngong Hills Forest, specifically in Kajiado North Sub County, Kenya. The findings related to this objective are presented in the subsequent subsections.

4.5.1 Member of the Ngong Metro Community Forest Association

The respondents were asked to indicate their membership status in the Ngong Metro Hills Community Forest Association. The findings, as presented in Table 4.9, reveal that a majority of the respondents (76.1%) were indeed members of the Ngong Metro Community Forest Association. On the other hand, 20.6% held a contrary opinion, while 3.3% were uncertain about their membership status. These findings indicate that a significant proportion of the respondents were affiliated with the Ngong Metro Hills Community Forest Association.

Table 4.9. Member of the Ngong Metro Community Forest Association

Member of the Ngong Metro Hills	Frequency	Percent
Yes	70	76.1%
No	19	20.6%
Not sure	3	3.3%
Total	92	100

Source: Field Data (2022)

A male respondent from the community said:

“Ngong Hills forest has three blocks, one of them is where we are right now, Ololua forest where we are surrounded by communities and some of us have direct access to the forest. My family have lived here for more than forty years and we know the benefit of the forest, cooling the climate, provide hay, sometimes, we have bees in the forest. I, my wife and our two children who are now grown up are members of the association.”

The FGDs further underscored the importance of being a member of the association:

“The community forest association is a good umbrella body that has enabled us to live harmoniously. We check on each other and ensure that we do not over exploit the forest resources nor go against the government directives” (Male FGD)

4.5.2 Knowledge of Association Executive Members

The study asked whether the executive members of the Ngong Metro Community Forest Association were known to the residents. The respondents were asked to indicate their awareness of the association's executive members. The corresponding findings are presented in Table 4.10.

Table 4.10. Awareness of Association Executive members

Extent of awareness	Frequency	Percent
To a greater extent	27	29.3%
To a great extent	29	31.5%
To some extent	28	30.4%
To a no extent	8	8.1%
Total	92	100

Source: Field Data (2022)

The majority of respondents (61.9%) indicated that they were aware of the executive members of the association. This suggests that a significant number of respondents were familiar with the members of the association's executive. The level of awareness regarding the executive members could be attributed to the fact that the leadership is relatively new, having been established in 2020, and therefore its members may be more recognizable to the respondents.

4.5.3 Access to Ngong Hills Forest Resources

The study also set out to determine whether women and men had equal access to the identified resources in Ngong Hills Forest. The respondents were asked to indicate whether they believed that both genders had equal access to the forest resources. The corresponding findings are presented in Table 4.11.

Table 4.11. Access to Ngong Hills Forest Resources

Access to Ngong Hills Forest Resources	Frequency	Percent
Strongly Agree	26	28.3%
I agree	42	45.7%
Strongly disagree	7	7.6%
I disagree	11	12%
I don't know	6	6.5%
Total	92	100

Source: Field Data (2022)

The findings presented in Table 4.11, indicate that the majority of respondents (74%) agreed that both men and women have equal access to Ngong Hills Forest resources. This indicates that there is perceived gender equality in accessing the forest resources.

These quantitative findings were further supported by the responses obtained from key informant interviews and focus group discussions. The qualitative data revealed that both women and men have been able to access the forest resources, particularly those that are not restricted by government regulations. The fact that the forest is unfenced allows the

community to freely enter and engage in activities such as grazing livestock, collecting honey, and gathering firewood.

However, it is important to note that some women participants in the women-only FGDs expressed concerns about security challenges they face, which affect their free access to the forest.

“As women, even though we have access to the forest resources, it is normally risky to venture out there alone. There have been cases of women being abducted, raped and even killed. It is always a risky affair trying to venture out there” (Women FGD).

4.5.4 Equal Rights to the Management of Ngong Hills Forest resources

On whether there were equal rights between women and men concerning the management of forest-related resources, the respondents were asked to indicate their perception of whether men and women had equal rights in the management of Ngong Hills Forest resources. The corresponding findings are presented in Table 4.12.

Table 4.12. Equal Rights to the Management of Ngong Hills Forest resources

Equal Rights to the Management	Frequency	Percent
Strongly Agree	68	73.9%
I agree	19	20.6%
Strongly disagree	1	1.1%
I disagree	3	3.3%
I don't know	1	1.1%
Total	92	100

Source: Field Data (2022)

Based on the findings, a significant majority of the respondents (94.5%) agreed that men and women have equal rights in the management of Ngong Hills Forest resources. Only a small number of respondents (4.4%) expressed disagreement with this statement. This indicates a high level of consensus among the participants regarding the equal rights of both genders in the management of forest resources.

The study sought to understand more on the feedback received from women and men living near Ngong Hills forest. The participants in the KIIs stated that women are more in the daily management of forest resources compared to men and especially on resources which contribute to their subsistent needs like gathering herbs, collecting firewood among others.

A male Member of Ngong Metro Community Forest Association said:

“Women are the majority; you rarely get the young people. They have not seen the need. That is why I said sensitization is lacking. We have a big list, but they refused joining and being active. So, we are 20 active members we meet every month and make contributions to help us do our activities. We are 6 men and the rest are women. Men and women participate equally, we have officials, who are of both genders however, women are very active compared to the men.”

According to the chairman of NMCFA Executive Committee,

“...In regards to each group, men are unfairly treated because women are more than men. Having more women mean a lot to us since they make a lot of efforts in taking care of the families. Women account for 65% while 15% are men and the rest 20% are youth. We can see the future is good because of having the youth. It is about the interest that is served for each population groupings. I think that it all depends on what people look for in the forest. Women, generally collect the firewood in the forest and grass for their cows meaning that they have more interest than men in the forest resources. Men would be interested if they had been allowed to harvest timber form the forest, cut wood to build something but this is illegal to us.”

According to the Secretary of NMCFA Executive Committee,

“...Yes. I start from where I sit. In Ololua forest, we have user groups which have more women as members but few in leadership. Out of nine user groups, 4 are headed by women while five are headed by men and in all the nine, the vice chairs

are men but the challenge is about men who are not ready to work as volunteers. They are the providers in their family and in the forest, one is not paid, one is volunteering, rendering service to the community. Most of the time we have meetings during weekdays and they are busy with work in their offices. But in case of holidays or Saturday, they are there.”

Findings from all FGDs confirmed that women are more active than men in managing the forest related resources. The men only FGD opined that the productive role of men as providers have left them with multiple responsibilities aimed at enabling them to cater for family needs. This leaves little room for them to get closely engaged in the management of forest resources. They therefore observed that even though both men and women are represented in the management, it is just fair that more women are involved in the management of forests. This is because of their availability and capacity to allocate more time towards accessing and managing forest resources.

“The truth is that women are more available to access and participate in the management of forests compared to the men who are engaged in multiple roles to make ends meet on behalf of the family” (Men FGD).

4.5.5 Equal Benefits from Forest Resources

The study aimed to evaluate whether women and men equally benefited from the identified resources in Ngong Hills Forest. The respondents were asked to indicate their perception of whether both genders derived equal benefits from the forest resources. The findings are presented in Table 4.13.

Table 4.13. Equal Benefit from Forest Resources

Benefit from the Forest Resources Equally	Frequency	Percent
Strongly Agree	21	22.8%

I agree	39	42.5%
Strongly disagree	14	15.2%
I disagree	14	15.2%
I don't know	4	4.3%
Total	92	100

A significant majority of the respondents (65.3%) acknowledged that women and men benefit from the resources identified in Ngong Hills Forest. This finding can be attributed to the recognition that certain forest resources, such as fuelwood, herbal medicine, and honey, can serve as a safety net for livelihoods. Consistently, interviews conducted with key informants as well as the FGDs revealed that women derive substantial benefits from non-timber forest products, while men tend to benefit more from timber products.

The following are some of the verbatim quotes from the informants:

“Yes, like grazing, men are happy when there is enough food for cattle and sheep although it is women and children who escort the animals to the forest and wait for them to come home in the evening. Women also use firewood for household cooking and preparation for food.”

“We are encouraging our sons to love forest so that they can join their fathers who keep beehives and sell honey harvested...sons are not interested”

According to the Chairman of NMCFA Executive Committee, the biggest problem that does not encourage participation is on the nature of benefits that accrue to the community.

He asserts thus:

“...With the nine user’s groups, each group meet every month, with 700 members, decisions are made and the leader of each group bring the decisions to the executive Committee for further action. Like now we are talking of forest conservation and management Act, which does not favor the community very much. There are some clauses there that do not favor the community. For example, the

national resource benefit sharing formula of 2005, which was amended in 2016, has no mention on how the community should benefit from the forest resources”

Participants in the focus group discussions reported that there is a lack of a formula that stipulates how women and men are supposed to share forest related resources. A participant in the young male FGD suggested that the government ought to develop a revenue sharing formula that enables the community to benefit more.

“It is important that the government develops a blue print that encourages equitable sharing of the proceeds of the forest. This will encourage conservation and relevance and as young people, our interest will grow bigger” (Young men’s FGD).

Another female participant in the young women FGD suggested that the youth should be allowed to benefit from revenue collected from the railway line that passes through the Ngong Hills forest.

“As young people, we should not be forgotten from the spoils. We need to be included in the revenue sharing plan including the resources from the railway line cutting across the forest”.

These views had been echoed by the Kenya Forest Service based in Kajiado County who during the interview shared that the government is in an advanced stage of developing a benefit sharing bill.

4.5.6 Management of Ngong Hills Forest Resources

The respondents were asked to indicate whether men and women participated equally in the management of Ngong Hills forest resources. The corresponding findings are presented in Table 4.14.

Table 4.14. Management of Ngong Hills Forest Resources

Management of Ngong Hills Forest Resources	Frequency	Percent
Strongly Agree	20	21.7%
I agree	49	53.4%
Strongly disagree	4	4.3%
I disagree	14	15.2%
I don't know	5	5.4%
Total	92	100

Source: Field Data (2022)

Based on the findings, a significant majority of the respondents (75.1%) agreed that both men and women participate equally in the management of Ngong Hills forest resources. This indicates that there is a perception of equal participation between genders in managing the resources of Ngong Hills forest.

According to a Member of Ngong Metro Community Forest Association, he noted thus:

“.... the forest is not well managed. There is no control, there is no fence; anyone can get in, even dumping of waste products from their homes. There are not enough scouts’ patrol/control.”

An official from Kenya Forest Resources stated thus:

“...The Kenya Forest Service (KFS) collaborates with the Community Forest Association (CFA) to facilitate the involvement of both women and men in the management of forest resources. The CFA comprises nine user groups from five locations. Each group consists of both female and male members, although women constitute the majority. Group members elects those in executive community. However, women shy away from taking up leadership positions.”

A female interviewee said:

“.....I would say the management is well done here, because these are people who are not brought from far. They are people around here who are able to respond quickly in case of any destruction of the forest. When we get any alarm of destruction of the forest, we respond quickly. We get those alarms from the community members and we go to the extent of getting community members to be community scouts to protect the forest.”

According to the FGD the forest is managed by the Kenya Forest Service and the Community Forest Association (CFA). Further, in terms of percentage, the women are a lot more involved in the management of the resources (60%) while the men despite being a lot more at the leadership position would come in at 40%.

4.5.7 Decision Making regarding Ngong Forest

The study aimed to investigate the extent of women's and men's involvement in decision-making and management processes concerning Ngong Hills forest resources. The respondents were asked to indicate whether both genders were actively engaged in decision-making regarding Ngong Forest. The findings are presented in Table 4.15.

Table 4.15. Decision Making regarding Ngong Forest

Decision Making regarding Ngong Forest	Frequency	Percent
Strongly Agree	17	19.1%
I agree	41	43.8%
Strongly disagree	11	12.4%
I disagree	19	20.2%
I don't know	4	4.5%
Total	92	100

Source: Field Data (2022)

62.9% of the respondents agreed that both men and women are actively involved in decision-making regarding Ngong Forest. However, some respondents disagreed, providing various reasons for their viewpoint. These reasons include the absence of clear guidelines from the Kenya Forest Service regarding the inclusion of women in community-level management structures, poor communication during the election of officials, limited awareness of the importance of gender representation in management structures, lack of incentives as most involvement is voluntary, which may be unattractive to youth and men, certain policies that impede equal participation, and differential gender needs that may restrict women's full engagement in decision-making processes.

According to the Chairman of NMCFA Executive Committee,

“.... Women are involved in decision making especially in matter of finances, we trust women more than men. Women are better managers and trustworthy. The challenge is that when those opportunities come for people to offer their candidature for elections, most women shy off and fail to contest. Additionally, women sometimes are too busy at the domestic from that they do not have enough time to participate fully in management processes. For instance, when you are elected a chair, people would call you every time even at night and this is quite demanding and tasking. Since women have many other responsibilities at home, they try to shy away from these active seats because. Otherwise, I think that they too could fare very well in the demanding positions.”

The FGD participants observe that women and men are relatively equal in their participation in decision-making regarding forest management even although there is a higher representation of men in leadership positions. The level of women's participation in decision-making is moderate, not excessively low but also not significantly high. In the Ngong Metro CFA, there are a total of five executive members, with only one being a woman.

“The low representation of women in the top management position could be just as a result of the inability of the women to offer themselves for the elective positions given their other reproductive responsibilities in the domestic front”,

4.5.8 Women Involvement in Decision Making

The respondents were asked to express their views on the desired level of women's involvement in decision making and management of Ngong Hills forest. The findings are presented in table 4.16.

Table 4.16. Women in Decision Making

Women Involvement in Decision Making	Frequency	Percent
At very high level	13	14.1%
High level	37	40.2%
Middle level	25	27.2%
Low level	17	18.5%
Total	92	100

Source: Field Data (2022)

A significant majority of the respondents (54.3%) expressed their preference for a high level of women's involvement in decision making and management of Ngong Hills forest. This indicates a strong desire for women to be actively engaged in these aspects.

Furthermore, the respondents were asked to provide concrete suggestions on how women could participate in decision making and management of Ngong Hills Forest. Their suggestions included:

- i. Increasing the representation of women in leadership positions by ensuring equal numbers of women and men in such roles.
- ii. Giving women a meaningful voice in informing policy decisions related to the forest.
- iii. Providing opportunities for women to manage their own user rights within the forest.
- iv. Encouraging every woman to feel empowered and participate in the management of forest resources.
- v. Implementing a policy where if a man holds the position of chairperson, the woman automatically becomes the vice chairperson and vice versa.

These suggestions highlight the importance of gender equality and the active involvement of women in decision making and management processes for Ngong Hills Forest.

4.6. Challenges of Accessing the Management of Forest Resources

The third objective of the study was to identify the challenges related to gendered access and participation in the management of forest resources in Ngong Hills Forest, Kajiado North Sub County, Kenya. The findings pertaining to these challenges are detailed in the subsequent subsections.

4.6.1 Sustainable Management of Ngong Hills forest resources

The study examined the opinion of the respondents regarding the equal participation and involvement of men and women in decision making for the sustainable management of Ngong Hills forest resources. The question was: does equal participation and involvement of men and women lead to sustainable management of forest resources? Table 4.17 presents the findings of their responses.

Table 4.17. Sustainable Management of Ngong Hills forest resources

Sustainable Management	Frequency	Percent
Strongly agree	13	14.1%
I agree	36	39.1%
I strongly disagree	25	27.2%
I disagree	17	18.5%
I don't know	1	1.1%
Total	92	100

Source: Field Data (2022)

The results show that 53.2% of the respondents agreed that for the sustainable management of Ngong Hills forests, there should be equal participation and involvement of men and women in decision making. On the contrary, 45.7% of the respondents disagreed with this notion. These findings suggest that achieving sustainable management of Ngong Hills forest resources would benefit from ensuring equal participation and involvement of both men and women in decision-making processes.

One key informant summarized this thus:

“Equal participation and involvement of both men and women in the management of the forest resources is the only sure way to enhance sustainability. The exclusion of any one gender can only compromise this process”.

4.6.2 Challenges in Management of Resources of Ngong Hills Forest

The examined the challenges faced by women and men in managing the resources of Ngong Hills forest. The respondents were asked to indicate the extent to which men and

women encounter challenges in resource management. The findings are presented in table 4.18.

Table 4.18. Challenges in Management of Resources of Ngong Hills Forest

Challenges	Frequency	Percent
To a greater extent	32	34.7%
To a great extent	34	37.0%
To some extent	25	27.2%
To a no extent	1	1.1%
Total	92	100

Source: Field Data (2022)

The findings indicate that a significant majority of the respondents (71.7%) expressed that men and women face substantial challenges in the management of resources in Ngong Hills Forest. This highlights that there is a significant level of challenges experienced by both men and women in managing the resources of Ngong Hills Forest.

According to the Chairman of NMCFA Executive Committee, this position could be resulting from what has been the tradition in forest management which has been inherently problematic. He noted thus:

“...Many years ago, forest was for men, they would go there for prayers, circumcision ceremonies and other cultural activities. However, things are changing, with the introduction of shamba system, now people have been given permission to farm certain crops, there are more women there, as they are looking for food to feed their families.”

According to the Secretary of NMCFA Executive Committee,

“...Most of the challenges facing forest management are male driven. Take for instance a problem like grazing in the forest, all of the illegal grazers are men and rarely are women involved. Awareness on the need to conserve forests should be done and this should not be a one-day affair. Community members must see the benefits of conservation.”

According to the respondents, lack of interest among the men is a challenge as they want to engage in fast income generating activities, this prevents gender equality from becoming a reality in the management and conservation of the forests. Other challenges include lack of proper coordination mechanism between the government through Kenya Forest Service and Community Forest Association; effects of climate change; lack of capacity for men and women to keep the forest healthy and resilient; encroachment due to population pressure and need for settlement and land for grazing; insecurity within the forest affecting mostly women and children; lack of clear guidelines on governance that directs composition of forest management structures outlining some of the threshold to attain for instance the two thirds gender principle and inclusion of young people and other vulnerable groups.

According to the Chairman of Ngong Hills Metro, there are several challenges that compromise proper management. He opines thus:

“...challenge number one is about interest, number two, they feel that it is a masculine issue, this is the work for men. It is also an issue that requires extra time. Sometimes it is requiring the whole day. Time is a big factor for availability. Also, in relation with our set-up, women have passion about conservation.”

According to KFS Ngong Forest officer, the fact that most of the community members around the forest are pastoralists also compromises their ability to avail themselves for management functions. He noted thus:

“...The community around Ngong Hills are mostly pastoralists, they do not find it easy to take up positions of management. Another challenge may be because of the culture that does not encourage formal education generally and more so, among the women. The illiteracy levels therefore hinders many from offering themselves for leadership positions.”

4.6.3 Major Challenges for Men and Women in Management of Resources

Table 4.19: Major challenges in the management of Ngong hills forest resources

Major Challenges	Frequency	Percent
a. The government has the monopoly in regard to the management	26	28.3
b. Traditions and culture do not allow it	1	1.1
c. Lack or little education	15	16.3
d. Gender based roles and rights	30	32.6
e. Women do not have managerial competences in the field	13	14.1
f. Women are not interested considering it as men affairs	5	5.4
g. Women do not see any benefit in getting involved in the management of the forest	2	2.2
Total	92	100

Gender-based roles and rights were identified as a significant challenge in the management of Ngong Hills Forest, accounting for 32.6% of the respondents' perspectives. Gender based roles refer to the natural and ascribed roles by the society. Women's role in reproductive and productive arena tend to be more intense compared to that of men leaving women with limited time hence engaging more on roles that enhance family livelihood. Men on the other hand are more active at the leadership platform where key decisions are made. This finding concurs with those of Sylvia (2014) who opine that the gendered nature

of women's rights limits the extent to which they can use and control natural resources for instance land.

On the second major challenge, 28.3% indicated that the government has the monopoly in regards to the management. According to the respondents, the lack of clear provisions in the existing forest management policy and legal framework regarding criteria for enabling equal participation of women and men in the management of forest-related resources was highlighted as a key challenge. One woman (executive official) at Ngong Metro CFA noted thus:

“.... with support from Kenya Forest Service we are developing our forest management plan which we have fought hard to indicate that if the chair is a man then the vice chair should be a woman. Men are not happy. However, the Forest Act only mentions that women and men should be members of the Community Forest Association, without providing any specific mechanisms to facilitate realization of their equal participation. Sometimes we (women) do not get to know when the elections are happening.... busy looking after our children and homes.”

Insufficient or limited education received a rating of 16.3%. Furthermore, the findings revealed that the lack or limited education serves as a significant challenge, impacting the capacity of both women and men in managing forest resources. During further discussions, participants in the focus groups emphasized that women are particularly affected, resulting in their significantly lower participation in forest management. They also highlighted the presence of exclusionary practices targeting women in both formal and informal structures.

Further probe on the informants indicated that due to lack of incentives, men participation in conservation activities in the forest is low. In addition, the youth were said to be disinterested with managing the forest resources since the role was voluntary. Majority of the young people were said to have no interest in joining or even taking up leadership

positions in the community forest association. Women on the other hand were said to have little contribution during CFA meetings. Lastly due to lack of awareness in the importance of managing forest resources, some community members were said to be involving in environmental malpractices such as dumping of waste, having animals destroy seedlings, and cutting of small trees for use as fuelwood.

“Lack of proper environmental awareness and closer engagement of the community members in the forest resources management has resulted in bad practices that can only compromise the quality of resources. Some people have engaged in logging, dumping and improper waste management that pollutes the ecosystem”.

4.7. Discussion of Findings

4.7.1 Resources that Exist in Ngong Hills

The study revealed that a significant majority of the respondents had resided near Ngong Hills Forest for a duration exceeding five years. The study also found that the respondents knew some resources that exist in Ngong Hills Forest. Some of the mentioned resources included firewood, medicinal plants, fruits, timber although there is a moratorium in place, Land for grazing and there is also land for farming. Grieg-Gran, Bass, Booker and Day (2015) noted that in Africa, timberland assets add to a green economy in different ways- giving wood items, producing pay and occupations, addressing needs for food, energy and restorative plants and conveying controlling and supporting environment administrations, affirming the job of backwoods in a green economy change.

The Forest also provides land for beekeeping . The hills found in the forest serve as a tourist attraction site (eco-tourism). Further, the respondent's livelihood depends on Ngong Hills resources. The findings agree with a study by Koech, Njuguna, Kiama, Maua, Kaigongi, Muganda, Nadir and Kigomo (2021) who explained that people from

different practices and cultures do live and depend on forests. In heavily depending on forest and its products, they do face many challenges related to deforestation, pressure logging and also legislation granted and restricted powers. The benefits accruing from the forests to the community include resources such as firewood and medicinal herbs. The Pastoralists are also able to take their cattle for grazing.

Generally, Ngong Hills forest resources hold significant importance for the respondents, the community, and the county. The forest plays a crucial role in providing fresh air to the residents, while also serving as an eco-tourism destination that attracts visitors who hike the hills. Moreover, the forest holds significance as a source of the Athi River, which supplies water to the local community.

4.7.2 Level of Gendered Access and Participation in Management

The study revealed that the majority of the respondents were members of the Ngong Metro Hills Community Forest, with both men and women being represented, albeit not in equal proportions. This finding aligns with a previous study by Okafor and Akokuwebe (2015), which noted that while men and women have differences, they may also share similarities in socio-economic status, education, and professional pursuits. In terms of involvement in forest management, women outnumber men, indicating their significant participation. The study also found that women are more actively involved in resource management, accounting for 60% of the participants, while men, despite holding more leadership positions, comprise 40%. This finding is consistent with Ochago's study (2017) on coffee pest management learning groups in the Mt Elgon region, where men's participation was at 46% compared to women's 25%.

Regarding decision-making, the study indicated that both men and women contribute to the process, but men occupy more leadership positions than women. The level of women's participation in decision-making was found to be moderate, neither excessively low nor exceptionally high. This observation resonates well with Chowdhury's research (2014) conducted in Bangladesh, where women's roles in management were found to be equal to men but hindered by various barriers such as political, social, cultural, legal, and institutional factors.

Furthermore, the study highlighted that women's involvement in decision-making and management of Ngong Hills forest should be promoted to a higher level. Concrete measures to achieve this include increasing women's representation in leadership positions, granting them opportunities to manage their own user rights, fostering an inclusive environment that encourages every woman's participation in forest conservation, and engaging them in forest user groups. These findings are in line with Mlambo, Kapingura, and Meissner's study (2019), which emphasizes the importance of incorporating women's perspectives and experiences in decision-making processes to achieve progress, equality, peace, and sustainable development.

However, it should be acknowledged that women still face significant barriers to participation and leadership in political and economic spheres, as highlighted by the United Nations (2015) and the OECD (2018).

4.7.3 Challenges of Accessing the Management of Forest Resources

The study revealed that achieving sustainable management of Ngong Hills forests necessitates equal participation and involvement of both men and women in decision

making. Additionally, the study found that men and women encounter significant challenges in the management of Ngong Hills Forest resources. These findings align with a study conducted by the Food and Agriculture Organization of the United Nations (2015), which highlights the distinct roles performed by males and females in forestry and agroforestry within impoverished nations. Many cultural, social, economic, and institutional factors work together to limit women's participation in forest management, limit their influence over forest resources, and limit their access to economic possibilities.

The study found that lack of interest among the men is a challenge as they want to engage in fast income generating activities, this prevents gender equality from becoming a reality in the management. Other challenges include lack of proper coordination mechanism between the government through Kenya Forest Service and Community Forest Association; effects of climate change; lack of capacity for men and women to keep the forest healthy and resilient; encroachment due to population pressure and need for settlement and land for grazing; insecurity within the forest affecting mostly women and children; lack of clear guidelines on governance that directs composition of forest management structures outlining some of the threshold to attain for instance the two thirds gender principle and inclusion of young people and other vulnerable groups.

The study uncovered several significant challenges faced by both men and women in the management of forests. These challenges include government monopolization of forest management, cultural and traditional barriers, limited education, gender roles and rights, lack of managerial competencies among women in the field, disinterest among women due

to perceived male domination of the sector, lack of coordination, inadequate knowledge and training in forest management, limited access to information and financial support.

The study also found that men often do not receive benefits from forest management, resulting in lower participation. Other challenges include lack of financial resources, security concerns, water resource management, interference from cattle damaging seedlings, limited awareness or resistance to participation in community forest associations (CFAs), lack of understanding about CFAs, limited contribution from women during CFA meetings, conflicts arising from environmental malpractices such as waste dumping, and insufficient political will in forest resource management.

These findings are consistent with a study conducted by Eneji, Mubi, Husain, and Ogar (2015) in forest communities in Nigeria, which also highlighted the unequal roles of men and women in resource management. Socio-cultural and traditional belief systems play a significant role as barriers to women's participation in managing forest resources in male-dominated societies.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the research findings. It also presents the conclusions drawn from the study and offers recommendations based on the findings. Additionally, potential areas for further research are suggested.

5.2 Summary of Findings

The first objective of the study was to identify the resources present in Ngong Hills Forest, Kajiado North Sub County, Kenya. The findings show that the forest encompasses various resources such as firewood, medicinal plants, fruits, timber, land for grazing, farming, and beekeeping. Additionally, the hills within the forest serve as tourists' attraction sites, contributing to eco-tourism. The study further established that the livelihoods of the respondents depend significantly on the resources found in Ngong Hills. These resources hold great importance for the respondents, the local community, and the county as a whole. For instance, pastoralists rely on the forest for grazing their cattle, while women particularly benefit from fuelwood and herbal medicine. Furthermore, Ngong Hills Forest provides fresh air to the residents, and the local community benefits from ecotourism activities, such as hiking. Additionally, the forest acts as a vital water source for the community, as it feeds into the Athi River.

The second objective of the study aimed to assess the level of gendered access and participation in the management of resources in Ngong Hills Forest, Kajiado North Sub County, Kenya. The findings indicate that both men and women are involved in the management of Ngong Hills forest resources, although not in equal proportions. Women

play a more significant role, accounting for 60% of involvement, while men despite holding a larger share of leadership positions at 40%. In terms of decision-making, men and women have equal participation, although men dominate leadership roles. The level of participation for women in decision-making can be described as moderate, neither too low nor too high. The study identifies several concrete ways to increase women's participation in decision-making processes, such as encouraging more women to assume leadership positions, allowing women to manage their own rights to forest resources, promoting active engagement and participation of all women in forest conservation efforts, and fostering their involvement in forest user groups.

The third objective of the study focused on identifying the challenges related to gendered access and participation in the management of forest resources in Ngong Hills Forest, Kajiado North Sub County, Kenya. The findings indicate that several challenges exist, including a lack of interest among men who prefer engaging in activities that generate quick income. Other challenges include a lack of proper coordination mechanisms between the government (specifically Kenya Forest Service) and the Community Forest Association, the impact of climate change, insufficient capacity among both men and women to maintain the forest's health and resilience, encroachment due to population pressure and the need for settlement and grazing land, security concerns within the forest (affecting primarily women and children), and the absence of clear governance guidelines that define the composition of forest management structures and outline thresholds to be achieved, such as the two-thirds gender principle and the inclusion of young people and other vulnerable groups.

5.3. Conclusion

Forests are identified as an epicenter of the global 2030 agenda for sustainable development. Further, forests are considered as a source of livelihood to men and women through provision of its variety of resources including food, biofuel , medicines among others. Men and women rely, access, use and manage forest products and services differently. While the majority of women use forest resources for subsistence reasons, men tend to use the resources for commercial gains.

Achieving equal representation and participation of women in positions of power and decision-making is crucial for sustainable development. However, the current state of women's representation and participation remains unsatisfactory, resulting in limited influence over development activities. Developed countries that have considered the needs and concerns of both men and women regarding access, utilization, and management of forest resources are more likely to achieve successful environmental and social outcomes.

In order to attain gender equality in the management of forest resources, it is imperative for governments to establish and enforce policies and legal frameworks that facilitate equal representation and participation of both men and women. This approach ensures that the diverse needs, concerns, and interests of men and women are taken into consideration and addressed at all levels of decision-making and resource management. By actively promoting and implementing such policies, governments can create an environment that fosters gender equality and empowers women to contribute meaningfully to the sustainable management of forest resources.

5.4. Recommendations of the Study

Based on the findings, the study puts forward the following recommendations:

1. Enhance gender mainstreaming: It is crucial to integrate a gender perspective into policies, plans, and programs related to forest resource management. This can be achieved by ensuring equal representation and participation of both men and women in decision-making processes, as well as considering the diverse needs, concerns, and interests of different genders.
2. Strengthen capacity building: Efforts should be made to enhance the knowledge, skills, and capacities of both men and women in managing forest resources. Providing training and education programs that focus on sustainable forest management practices can empower individuals to actively contribute to conservation efforts and address challenges effectively.
3. Develop clear guidelines and frameworks: Governments should establish clear guidelines and frameworks that outline the composition of forest management structures, ensuring the inclusion of women and other marginalized groups. This should also incorporate the principle of gender equality, such as the two-thirds gender rule, to promote equal representation and decision-making power.
4. Foster collaboration and coordination: Strengthening collaboration and coordination between government institutions, such as the Kenya Forest Service, and community-based organizations like the Community Forest Association, is essential. This will enable effective resource management, enforcement of regulations, and improved communication channels for addressing challenges collectively.
5. Promote women's empowerment: Efforts should be made to empower women in forest resource management by providing them with leadership opportunities,

encouraging their active participation, and recognizing their contributions. This can be achieved through initiatives that support women's access to education, training, and economic opportunities in the forestry sector.

6. **Raise awareness and change cultural norms:** It is important to raise awareness about the importance of gender equality in forest resource management and challenge cultural norms and stereotypes that hinder women's participation. Engaging in public campaigns, community dialogues, and education programs can help shift perceptions and promote greater gender inclusivity.
7. **Conduct further research:** Additional research is needed to explore other aspects of gendered access and participation in forest resource management. This includes investigating the impact of gender roles and rights, exploring best practices from other countries, and assessing the effectiveness of interventions aimed at promoting gender equality in the forestry sector.

By implementing these recommendations, stakeholders can work towards achieving gender equality in the management of forest resources, fostering sustainable development, and ensuring the inclusion of diverse perspectives in decision-making processes.

5.5. Suggestions for Further Study

The study focused on gendered access to management of forest resources in Ngong hills forest, Kajiado North Sub-County. By exploring other research areas, a deeper understanding of gender dynamics, effective interventions, and inclusive approaches in forest resource management can be gained, leading to more informed policies and practices for promoting gender equality and sustainable development. These studies would include among others:

- i. Gender dynamics in forest resource governance: Conduct in-depth studies to examine the specific gender dynamics and power relations within forest resource governance systems. Explore how gender norms, cultural practices, and institutional structures influence women's access, representation, and decision-making authority in forest management.
- ii. Gender-responsive forest policies and interventions: Investigate the effectiveness of gender-responsive policies and interventions in promoting women's participation and empowerment in forest resource management. Assess the outcomes and impacts of initiatives that aim to address gender disparities and promote inclusive decision-making processes.
- iii. Economic empowerment and women's roles in forest management: Explore the economic aspects of women's participation in forest management, including their access to livelihood opportunities, income generation, and entrepreneurship. Examine the linkages between women's economic empowerment, sustainable forest management, and community development.
- iv. Climate change and gender dimensions: Investigate the gendered impacts of climate change on forest-dependent communities and explore how gender-responsive strategies can enhance community resilience and adaptive capacity. Analyze the role of women in climate change mitigation and adaptation efforts in forest ecosystems.
- v. Intersectionality and gender in forest management: Explore the intersectional dimensions of gender in forest management by examining how other social identities, such as age, ethnicity, and socio-economic status, intersect with gender

to shape access, participation, and decision-making processes. Assess the implications of intersectionality for promoting inclusive and equitable forest governance.

- vi. Knowledge sharing and capacity building: Investigate effective approaches for knowledge sharing, capacity building, and skill development programs that enhance women's engagement and leadership in forest resource management. Assess the long-term impacts of such initiatives on sustainable forest practices and community empowerment.

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APPENDICES

Appendix I: Informed Consent

Dear sir/madam,

My name is Tabitha Nyambura Reg. No. N69/72151/08 from the Institute of Anthropology Gender and African studies in the University of Nairobi. I am conducting a study on “Men and women access to the management of forest resources in Ngong Hills Forest, in Kajiado North Sub County, Kenya”.

The purpose of this letter is to seek your participation in this study by giving your views and contribution. The information provided will be treated with utmost confidentiality and strictly for the purpose of this research.

Your honest responses will be highly appreciated.

Thank you in advance.

Sign..... 

Appendix II: Questionnaire Survey

Introduction

Good Morning/Afternoon? My name is Tabitha Nyambura a master's student in Gender and Development at the University of Nairobi. I am conducting a study on Men and women access to the Management of Forest resources in Ngong Hills Forest, in Kajiado County, Kenya. You have been selected to participate in this study and therefore the purpose of this questionnaire is to help collect data. All the respondents' and information given will be treated with utmost confidentiality. Kindly answer the following questions by ticking in the appropriate box or filling the space provided.

Section A: Demographic Characteristics

1. **Sex**
 - a. Male []
 - b. Female []
 - c. Other []
2. **Age (tick one)**
 - a. 20 to 30 []
 - b. 30 to 40 []
 - c. 40 and above []
3. **Family Status**
 - a. Single []
 - b. Married []
 - c. Divorced []
 - d. Widowed []
4. **What is your highest level of education?**
 - a. Primary []
 - b. Secondary []
 - c. College []
 - d. University []
 - e. Never attended School []

Section B. Questions (Please tick the appropriate response)

Objective One. To identify resources that exist in Ngong Hills Forest, in Kajiado County, Kenya

1. **How long have you been living around Ngong Hills Forest?**
 - a. 1 years
 - b. 2 Years
 - d. 3 years
 - e. More than 5 years
2. **Do you know well what resources Ngong Hills Forest has? If your answer is (a) go to Objective 2 question 6**
 - a. I don't know anything about forest resources
 - b. Yes, I know some resources
 - c. Yes, I know all resources
 - d. Not sure
3. **What are the resources found in Ngong Hills Forest? Please tick up to 5 resources**

SN	Type of Resources	Resources in Ngong Hills Forest
a.	Firewood	
b.	Timber	
c.	Grazing Pastures for livestock	
d.	Medicinal herbs and plants	
e.	Walnuts	
f.	Fruits	
g.	Land for beekeeping	
h.	Precious Stones	
i.	Others (Specify)	

4. Do you depend on Ngong Forest Resources for your livelihood?

- a. Yes, very much
- b. Yes
- c. Sort of
- d. Not Much
- e. Not at all
- f. Other (specify)_____

3. To what extent is Ngong Hills Forest resources important to you, to the community and to the County

To a greater extent

To a great extent

To some extent

No important at all

Objective 2: To assess the level of access of men and women in management of resources in in Ngong Hills Forest, in Kajiado County, Kenya.

4. Are you a member of the Ngong Metro Hills Community Forest Association?

a. Yes

b. No

c. Not sure

5. To what extent are you aware of the Ngong Metro Hills Community Forest Association Executive members

a. To a greater extent

b. To a great extent

c. To some extent

d. To a no extent

6. Men and women have access to Ngong Hills Forest resources equally

a. Strongly agree

b. I agree

c. I strongly disagree

d. I disagree

e. I don't know

7. Men and women must have equal rights to the management of Ngong Hills Forest resources

a. Strongly agree

b. I agree

c. I strongly disagree

d. I disagree

e. I don't know

5. Men and women have access to Ngong Hills Forest resources equally

a. Strongly agree

b. I agree

c. I strongly disagree

d. I disagree

e. I don't know

6. Men and women must have equal rights to the management of Ngong Hills Forest resources

a. Strongly agree

b. I agree

c. I strongly disagree

d. I disagree

e. I don't know

7. Men and women benefit from Ngong Hills Forest resources equally

a. Strongly agree

- b. I agree
 - c. I strongly disagree
 - d. I disagree
 - e. I don't know
- 8. Men and women participate in the management of Ngong Hills Forest resources**
- a. Strongly agree
 - b. I agree
 - c. I strongly disagree
 - d. I disagree
 - e. I don't know
- 9. Men and women are fully involved in decision making regarding Ngong Hills Forest**
- a. Strongly agree
 - b. I agree
 - c. I strongly disagree
 - d. I disagree
 - e. I don't know
- 10. If you disagree to the statement, explain why men and women are not fully involved in decision making**
-
-
-
- 11. Which level would you considered women involvement in decision making and management of Ngong Hills forest**
- a. At very high level
 - b. At high level
 - c. Middle level
 - d. Low level
 - e. No level at all.
- 12. Explain how you would want to see women concretely do as far as decision making and management of Ngong Hills Forest is concerned.....**

Objective 3: To establish the challenges that men and women face in accessing the management of forest resources in Ngong Hills Forest, in Kajiado County, Kenya

- 13. For sustainable management of Ngong Hills forests, men and women should participate and be involved equally in decision making**
- a. Strongly agree
 - b. I agree
 - c. I strongly disagree
 - d. I disagree
 - e. I don't know

14. To what extent do men and women face challenges in management of resources in of Ngong Hills Forests?

- a. To a greater extent
- b. To a great extent
- c. To some extent
- d. To a no extent

15. Can you explain your response in regard to the above.....

.....
.....
.....

16. What, in your opinion, are the major challenges for men and women when it comes to the management of resources in Ngong Hills Forest (you may tick more than one response)

- a) The government has the monopoly in regard to the management
- b) Traditions and culture do not allow it
- c) Lack or little education
- d) Gender based roles and rights
- e) Women do not have managerial competences in the field
- f) Women are not interested considering it as men affairs
- g) Women do not see any benefit in getting involved in the management of the forest

17. Can you please elaborate on the challenges that men and women face when it comes to the management of resources in Ngong Hills Forest?

.....
.....
.....

Appendix III. Interview Schedules for KIIs

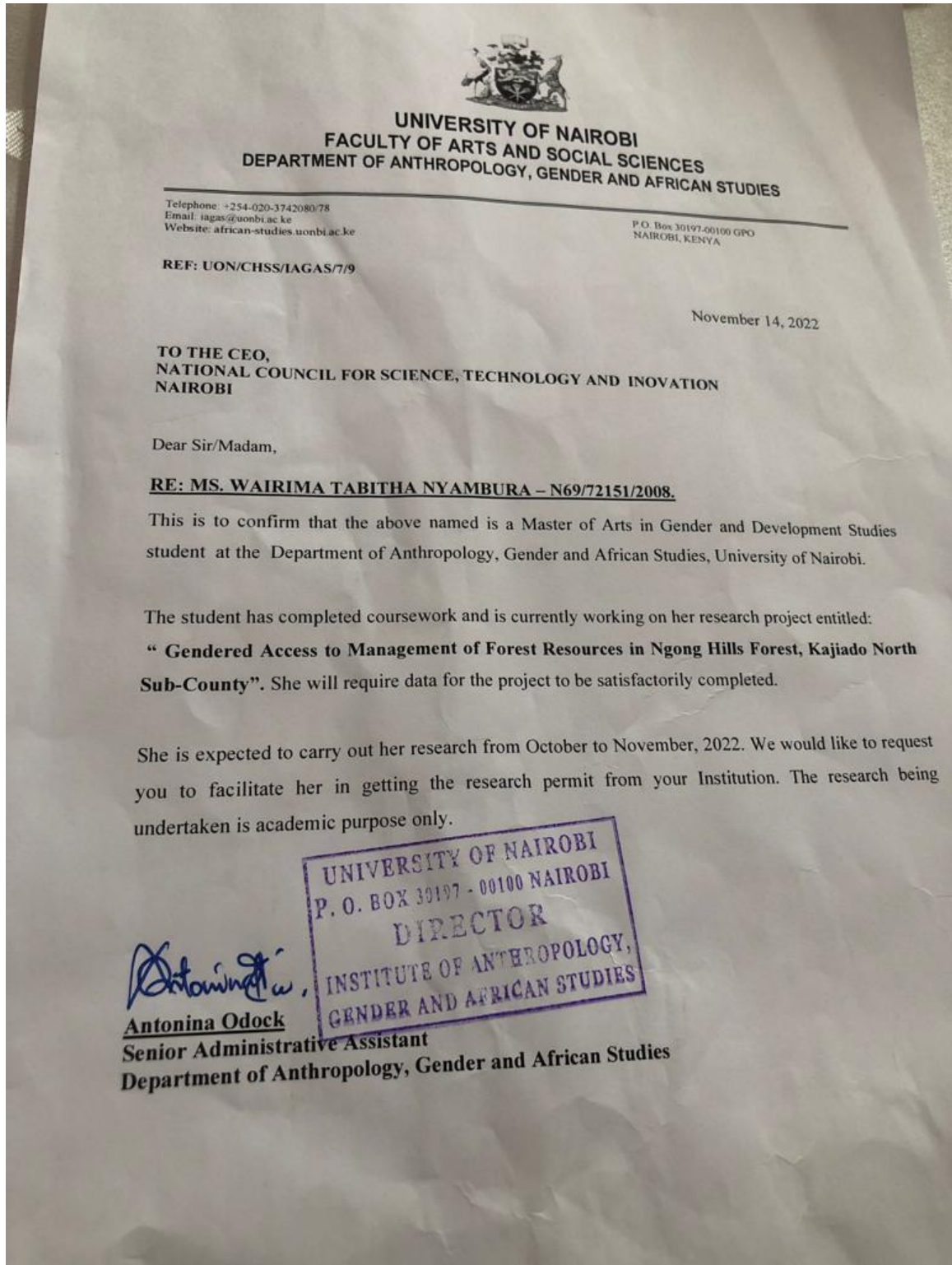
1. Can you briefly talk of Ngong Hills forest, its importance to the local community and the County as a whole?
2. What are the resources that are found in Ngong Hills forest?
3. Do you think the community do benefit from them?
4. Who manages Ngong Hills forests?
5. Do you think that the forest is well managed?
6. Are the local communities' part of the management team?
7. If yes are men and women equally represented in the management team?
8. Do men and women equally participate in decision making in regards to the management of the forest?

9. If not, what is, according to you, the level of women participation in decision making?
10. If not, what is the composition of the management team in term of gender equality?
11. If gender equality is not observed, what are the reasons, what are the challenges or obstacles according to you.
12. What are your recommendations for equal participation and involvement in the management of Ngong Hills forest:
 - a. To the National Government
 - b. To the County Government
 - c. To the Management Committee
 - d. To the local communities

Appendix IV: FGD Guide


1. Importance of Ngong Hills Forest to the community
2. Resources that are found in Ngong Hills forest
3. Do you think the community do benefit from them?
4. Management of Ngong Hills forests?
5. Do you think that the forest is well managed?
6. Are the local communities' part of the management team?
7. If yes are men and women equally represented in the management team?
8. Do men and women equally participate in decision making in regards to the management of the Forest?
9. If not, what is according to you the level of women participation in decision making
10. If not, what is the composition of the management team in terms of gender equality?
11. If gender equality is not observed, what are the reasons, what are the challenges or obstacles according to you.
12. What are your recommendations for equal participation and involvement of men and women in the management of Ngong Hills forests?
 - a. To the National government
 - b. To the county government
 - c. To the management committee
 - d. To the local communities

Appendix V: Introduction Letter



Appendix VI: Research Permit

REPUBLIC OF KENYA




NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 294319

Date of Issue: 16/November/2022

RESEARCH LICENSE



This is to Certify that Ms. Tabitha Nyambura Wairima of University of Nairobi, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kajiado on the topic: **GENDERED ACCESS TO MANAGEMENT OF FOREST RESOURCES IN NGONG HILLS FOREST, KAJIADO NORTH SUB-COUNTY** for the period ending : 16/November/2023.


License No: NACOSTI/P/22/22202

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Director General

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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See overleaf for conditions

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Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
 - i. Endanger national security
 - ii. Adversely affect the lives of Kenyans
 - iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
 - iv. Result in exploitation of intellectual property rights of communities in Kenya
 - v. Adversely affect the environment
 - vi. Adversely affect the rights of communities
 - vii. Endanger public safety and national cohesion
 - viii. Plagiarize someone else's work
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4. The license any rights thereunder are non-transferable
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6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

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