EXAMINATION OF THE GENDERED ASPECTS OF NATURAL RESOURCE CONFLICT MANAGEMENT IN RIVER RONGAI AREA, NAKURU COUNTY, KENYA

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DECLARATION AND RECOMMENDATION

Declaration

This thesis is my original work and has not been presented in this university or any other for the award of a degree.

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DEDICATION

This thesis is dedicated to the memory of my late father, Mr. Charles Akai, whose deep passion for education remained unwavering, despite not having the opportunity to pursue it to the highest level in his time. To my mother, Martha, who singlehandedly and selflessly supported my education up to the bachelor's level. And to my sponsor, Mind the Gap Research & Training, for believing in my potential and supporting this academic journey.

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ABSTRACT

One of the major challenges in the world is the natural resource-based conflicts. In other parts, conflicts over land, water and other natural resources are induced by an aspect of competition. This paper has examined gendered issues of natural resources conflict management (NRCM) in the River Rongai region of Nakuru County, Kenya where there have been intermittent conflicts over resource sharing of water. It particularly examines the way men and women perceive and react to conflict, involve themselves in conflict management, the success of the current community-based strategies and the role of gender role in conflict management outcomes. Environmental feminist views that were summarized by Argawal led the study and used the Thomas and Kilmann conflict model to question the different types of conflict resolution styles in gendered experiences of resource conflict. The research design used was explanatory sequential mixed methods research design in order to gather data on 154 respondents. The multistage sampling technique was used to get the sample size and this was suitable since the population had a geographical dispersion, and different stakeholder groups were involved. Moreover, purposive sampling was used to pick key informants and focus group members were purposively picked among the established community groups. The participant observation, focus group discussions and surveys were used as data collection methods. Descriptive statistics was used to analyse quantitative data, and thematic coding and analysis were done on qualitative data to determine patterns. The result showed that there was a difference in the way men and women interacted in conflicts whereby the women tended towards the collaborative and avoidance styles and men tended to the competing and confrontational styles. These socioeconomic disparities and other issues, particularly between upstream users and downstream users, led to a feeling of injustice and an increased conflict. Despite these challenges, the study identified informal community efforts including dialogue, rotational water-sharing agreements, and alternative water sources as effective grassroots strategies for conflict management. Findings from this research are expected to strengthen local communities' conflict management mechanisms and to promote gender-inclusive peace-building strategies. Additionally, the study will inform policy by indicating how gender-responsive approaches can contribute to sustainable conflict management. The study offers practical, lessons in gendered approaches to natural resource conflict management and policy recommendations for other regions in Kenya and beyond, that face similar natural resource conflicts.

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LIST OF ABBREVIATIONS AND ACRONYMS

AAWP	All African Women for Peace
AIC	African Inland Church
CM	Conflict Management
DRC	Democratic Republic of Congo
DV	Dependent Variable
FAO	Food and Agricultural Organization
IV	Independent Variable
MtG	Mind the Gap Research and Training
NR	Natural Resource
NRC	Natural Resource Conflict
NRCM	Natural Resource Conflict Management
OSCE	Organization for Security and Cooperation in Europe
PACV	Participatory Activities
RWH	Rain Water Harvesting
RUF	Revolutionary United Front
TJS	Traditional Justice System
UN	United Nations
UNEP	United Nations Environment Program
UNITA	National Union for The Total Dependence of Angola
USAID	United States Agency for International Development
USIP	United States Institute for Peace
WCED	World Commission on Environment and Development
WRUA	Water Resource Users Association

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Women and men experience and respond to conflict differently (Ní Aoláin *et al*., 2018) yet the study of conflict and the field of conflict resolution and its methods have been accused of being gender blind (Reimann, 2002); (Ramsbotham *et al.,* 2011). Researchers and practitioners in natural resource conflict management (NRCM) have also overlooked gendered dimensions of conflict (Ryan, 2022). However, this perspective is gradually shifting and there is a growing recognition that gender analysis is crucial for comprehending NR conflicts and addressing them effectively (Selby *et al*., 2022).

Natural resources conflicts often relate to disputes over rights to use, own or access land, water, forest resources or fisheries and to wildlife conflicts (Kyem *et al*., 2021). Addressing NRCM through a gender lens involves looking beyond the visible, public aspects of inter-community disputes to explore the underlying dynamics within societies, communities and households as part of stakeholder analysis generally and gender analysis specifically (Misra 2024). Taking a gendered approach helps to understand the distinct roles, responsibilities, needs and sources of power for men and women (Lindsley, 2020) and in doing so opens a greater range of possibilities for analysis and resolution (Proksch, 2016).

As key users of natural resources, women are significantly impacted by NR conflicts, potentially playing roles both in their resolution and/or escalation. Women and men may or may not be directly involved in NR conflicts but will always be indirectly involved as family members of men who are engaged in or injured during these disputes. A household's direct involvement in NR conflicts can lead to them experiencing violence, loss of income, restricted access to resources and limitations on their freedom of movement (Ahmadnia *et al*., 2022).

Women, therefore, can make substantial contributions to managing NR conflicts. Due to their gender-specific roles and responsibilities, women and men offer different perspectives, needs and strengths, enabling them to offer distinct analyses and potential solutions for conflict transformation (Rahim *et al*., 2020). Despite their generally low participation in formal NR conflict management institutions, women often exert significant influence behind the scenes, for example by influencing, guiding or supporting male-led analyses and decision-making (Tabassi *et al*., 2019).

In June 2000, United Nations Security Council Resolution (UNSCR) 1325, affirmed the role of women in conflict prevention and management, stressing the importance of involving women in all aspects of promoting and maintaining peace. However, the ambitions

of Resolution 1325 are rarely attained because of poor gender analyses and the failure to challenge gender discriminatory practices in communities (Kaufman *et al*., 2018). The improvement of these barriers in the River Rongai context is significant in promoting the conflict management (CM) strategies that acknowledge the functions of men and women in addition to being receptive to the opportunities that explicitly gendered approaches can provide to inclusive and sustainable NRCM.

In Africa, there is All African Women for Peace (AAWP) which is aimed at making sure women possess skills, tools and confidence to engage in the process of promoting peace on a par with men. The AAWP also educates women in communities on human rights and law, carries out research and networking in Africa (Dugard, 2020). In occasion when the rates of participation are high and there are ways of expressing opposition as well as arriving at a consensus, the NRCM would be approached more creatively and help to draw sustainable conclusions (Kashwan et al., 2024).

This paper examined conflict and peace taking into consideration the gendered dimension of conflict and peace in NRCM. It discussed the content and scope of gendered roles and styles that have been maintained and affect conflict management procedures within the River Rongai catchment. The study was also an attempt to learn the conflict management approaches already in existence within the River Rongai communities and offer practical measures on enhancing on the same to establish gender inclusive peace-building practices.

1.2 Statement of the Problem

The River Rongai area has experienced sporadic community conflicts over water for livestock, farming and livelihoods. Despite some community level interventions aimed at resolving disputes, such as local peace committees and government regulations on water usage, these efforts have been limited in addressing the specific needs and contributions of women and men. Existing conflict management (CM) approaches are largely gender blind, leaving a gap in sustainable solutions that incorporate gender sensitive, gender-responsive or gender-transformative strategies. The study focused on the gendered aspects of natural resource conflicts in the River Rongai area. It examined how women and men experience and respond to these conflicts and identifies their needs and aspirations during periods of NRCM.

1.3 Research Objectives

1.3.1 General Objective

To examine the gendered aspects of natural resources conflict management in the River Rongai area, Nakuru County, Kenya.

1.3.2 Specific Objectives

i. To identify the nature of natural resources conflicts that exist in the River Rongai area, Nakuru County.
ii. To analyse the gendered approaches to natural resources conflict management in River Rongai area Nakuru County.
iii. To evaluate gender-specific challenges in NR Conflict management in the River Rongai area in Nakuru County Kenya.

1.4 Research Questions

i. What types of natural resource conflicts exist in the River Rongai area, and what are their root causes?
ii. What ways do men and women engage in the management of natural resource conflicts in the River Rongai area in Nakuru County, Kenya?
iii. What are the gender-specific challenges in natural resource conflict management in the River Rongai area in Nakuru County, Kenya?

1.5 Justification of the Study

It is important to acknowledge the unique positions, conditions, needs and desires of women within cultural, communities and societal contexts in relation to men (Grillos, 2021). Recognizing these differences is a necessary step in enhancing community´s role in conflict management and decision-making power during NRCM. The intersection of gender in natural resource conflict and its management has remained under researched in Kenya and yet studies have demonstrated that men and women's inclusion can increase the chances of securing peace and stability (Li & Nguea, 2025)

This study will contribute to existing knowledge concerning gender in conflict management, especially vis-à-vis natural resources conflict and specifically, conflicts relating to water use and allocation. The River Rongai case study offered a relevant local examination of conflicts. The empirical data from which existing feminist environmentalism theory and one conflict management model The Thomas-Kilmann Conflict Mode Instrument (TKI) was interrogated. The study revealed practices that will potentially inform solutions to various natural resources conflict contexts elsewhere in Kenya and beyond.

1.6 Scope and Limitations of the Study

This study focused on gendered aspects of water resource conflicts in the River Rongai area, Nakuru County. It examined conflicts arising from water use for livestock, farming and livelihoods, exploring the roles, experiences, and contributions of women and men during conflict and peacebuilding phases. The research examined the conflict management strategies

that draw on local peace committees, government regulations, and community-led initiatives, and that involve stakeholders like community leaders and Water Resource Users Association (WRUA).

The research was confined to River Rongai catchment area. Therefore, its findings and generalizations apply to this specific study area and may not apply to other regions, because experiences are different and unique. Additionally, language barriers may have hindered effective communication with some community members. This may have limited the depth of data collection. Although this was addressed by having an interpreter.

1.7 Definitions of Terms

Conflict management - is broadly defined as the processes, strategies and practices employed to address, mitigate or resolve conflicts in a non-violent manner according to (Funder *et al,* 2024). In this study, conflict management refers to the strategies and practices employed by the community in River Rongai area to address disputes over water as a natural resource.

Dispute - According to the Oxford dictionary, a dispute is defined as a disagreement or argument about something important often involving opposing ideas, claims or interests. In this study disputes refer to a disagreement or contention arising between stakeholders in River Rongai area over the use of water.

Gender - refers to the socially constructed roles of men and women as well as the interactions between them. Moreover, 'gender' in this context is used to include consideration for the differentiation between men and between women in terms of social status, caste, literacy, decision making and leadership.

Gendered aspects – refers to the influence of socially constructed gender roles and expectations. Baker (2019) highlights how experiences and opportunities differ in individuals based on their gender identity within specific cultures. In this study, gendered aspects refer to how gender roles and relations shape conflict management in River Rongai area.

Natural Resource Conflict (NRC) – According to Turner (2004) an NRC is a social conflict that can either be violent or non-violent, and primarily revolves around how individuals, households, communities and states control or gain access to resources within specific frameworks. For the purpose of this study, natural resource refers to the disputes arising from competing uses and access to water resource in River Rongai area.

Role - According to Reid (2007) a role is a set of behaviours, responsibilities, and expectations associated with a particular position, group, or function in a society. In the context of River Rongai, Role refers to the specific responsibilities, actions, and expectations assigned to or assumed by individuals based on their gender.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on conflict management and gender dynamics in natural resources, with focus on the River Rongai area. It examined how local communities have navigated customary and contemporary conflict management practices. The chapter also reviews the global gender dimensions of NR conflicts management.

2.2 Natural Resource-Based Conflicts

Conflicts over NR have gained interest among agencies and governments. This has undermined local, regional, national and international security (Olanrewaju *et al*., 2020). The nature of the conflicts on natural resources mostly arise when stakeholders hold opposing interests, values, beliefs, power dynamics or goals. (Rjoub *et al*., 2021). These conflicts if not adequately addressed, often intensify over time (Wassie, 2020). According to Folger *et al*. (2024), what sets conflict apart from a simple disagreement is the point at which one party begins to act in a way that harms or undermines the interests of another. Conflict may manifest in various forms, including threats, physical violence, appropriation, uprisings, and both local and cross-border armed conflicts (Väyrynen, 2022)

Väyrynen (2022) further argues that tensions over limited natural resources, divergent worldviews and weak institutional frameworks, often aggravates conflicts. Perceptions or realities of scarcity are central to the emergence and persistence of natural resource conflicts (Zahra, 2020). Scarcity-related disputes are particularly common, shaping much of the friction surrounding natural resource use and management (Hussein *et al*., 2025). The literature identified several distinct types of natural resource conflicts, including but not limited to those linked with biodiversity, land, fishing, forestry and water access.

According to the Food and Agricultural Organization natural resource-based conflicts have been defined as disagreements or disputes about using, accessing, and managing natural resources (Yunusa & Owoyemi, 2025). Conflicts can also arise when interests and needs are incompatible or when the priorities of some stakeholder groups are not considered in policies, programs and projects (Florino *et al*., 2023). Florino *et al*., further argue that such conflicts of interest are often inevitable features of most societies, positing that four necessary conditions influence how access to resources could become contested. These are the scarcity of a resource, the extent to which two or more groups share the resource supply, the relative power of those groups, and the degree of dependence on the resource or the ease of access to alternative sources.

Natural resource conflicts could be classified at three scales (Verbyla, 2022); micro-micro conflicts, i.e. between or among stakeholders, micro-macro conflicts, e.g. between local and national or international stakeholders, and macro-macro or intergovernmental conflicts. This case study concerns the micro-micro conflict in the River Rongai area. Micro-micro conflicts refer to those occurring either within a group directly involved (e.g. a Forest or Water Users Group) or between such groups and those who are not directly involved (e.g. between the User Group and women entering a forest to collect firewood) (Verbyla, 2022).

According to the United States Institute of Peace (USIP), NRs play a fundamental role in societies across the world, serving as an income, industrial growth, and cultural identity. The USIP further states that developing countries tend to depend more on natural resources as their primary source of income, with many individuals depending on them for their livelihoods. It estimates that half of the world's population remains directly tied to local natural resource with many rural communities depending on agriculture, fishing, minerals and timber as their primary sources of income (Wassie, 2020).

As stated above, natural resource conflicts mainly arise from climate change, resource scarcity, abundance and overpopulation. Climate change is interfering with weather patterns, causing droughts and water shortages that heighten competition. Scarcity of resources due to overuse or mismanagement contributes to tensions, while abundance of valuable resources like minerals or oil attracts disputes over control and benefit distribution. Overpopulation increases pressure on land and water, as the available resources are already scarce (Maja *et al.,* 2021).

2.2.1 Global Dimensions of Natural Resource Conflict Management

Globalisation has brought societies together across borders; localised conflicts now have wider implications, often involving regional or international arenas (Luo, 2024). The United Nations (UN), and other International Organizations (IO) such as the Organization for Economic Cooperation and Development (OECD) and World Bank have major and diverse roles in international conflicts. The UN operates through peacekeeping missions, diplomacy and mediation to prevent conflicts, resolve disputes, and maintain peace in post- conflict communities, through United Nations Security Council (UNSC) is responsible for upholding peace and resolving conflicts internationally (Malik *et al*., 2023).

The River Jordan water distribution is a crucial resource in the Middle East that has been an area of conflict between Israel and Jordan in the past (Beithou et al., 2022). Water scarcity and population pressures contributed to the worsening of the conflict. The United States (US) acted as a facilitator of peace efforts in the region assisted by the UNSC which resulted in signing of the peace treaty between Israel and Jordan in 1944 (UN, 1995). The treaty

formed a joint water committee that control the equitable distribution of water and management of resources. Such cooperation gave an opportunity to the two nations to exchange water of the Sea of Galilee and the Yarmouk River, as well as to build joint desalination and water facilities (Hussein, 2019). The agreement did not only address the tensions at that moment, but also established a framework of future cooperation, which shows how legal systems and institutional cooperation can be a powerful tool to handle the conflicts of natural resources in the areas that are characterised by geopolitical conflicts.

Considering the increasing conflicts over natural resources, gender prism of conflict management should be the major concern growingly (James et al., 2021). Although IO has been keen on ensuring it is instrumental in peace building, its activities do not pay much attention to the local activities and actors like the civil society organizations that often carry out projects commissioned by IOs like United States Agency for International Development (USAID), World Bank and UN (Leach et al., 2025). Local voices are not used in the conflict analysis in the international level in most of the cases (Ide et al., 2021). In this attempt, the study seeked to fill this gap on peace building at communal level in the River Rongai region by positioning the criticality of bridging the global peacebuilding frameworks with local and inclusive methods in ensuring sustainable water governance.

2.2.2 Natural Resource-Based Conflict in Africa Region

Resource based conflicts in Africa are studied along areas that witness conflict (Olanrewaju *et al.,* 2020). Olanrewaju *et al.* puts conflicts into distinct systems, identifying the Horn of Africa and the Great Lakes region as the most vulnerable. They highlight linkages that connect various conflicts in these regions to national, regional, and international dynamics, creating a complex interdependencies that sometimes escalate tensions across borders. As stated earlier, it is argued that conflicts arise from environmental resources that communities share. For instance, conflict between herders and farmers in Ethiopia's Awash Valley and in the Nile flood plain of Sudan's Equatorial Province have linkages to wider regional conflicts involving Sudan, Ethiopia and Egypt (Azage *et al*., 2025).

To better understand how natural resources, relate to conflict, this research suggests looking at the connection in three main ways: first, as a cause of conflict; second, as something that can make conflict last longer; and third, as a possible way to help solve conflicts. This approach gives a fuller picture and highlights the important role that NRCM plays. There are several key ways in which natural resources contribute to prolonged conflict. The first and most widely recognised is their use as a source of funding for armed groups. With the withdrawal of superpower support after the Cold War, many rebel movements turned to exploiting the natural

resources within their control to finance warfare. This can be observed in relation to Angola, the Democratic Republic of Congo (DRC), Liberia and Sierra Leone, where resources like diamonds were used to fund violent conflicts using the revenue generated from such resources (Kawamoto, 2012).

Second, the value of natural resources sites has frequently turned into hot battle zone. The power of resources in control over resource rich territories promotes the magnitude and severity of violence as evidence in the ruthless fights over Kisangani in DRC between the Ugandan and the Rwandan forces. On the same note, the diamond rich provinces of Angola, Luanda Norte and Luanda Sul were among the most fought areas during its civil war. Third, it happens that groups that possess valuable natural resources tend to be adamant to peace negotiations (Agbonifo, 2021). Agbofino notes that leaders such as Jonas Savimbi of UNITA in Angola, Charles Taylor of NPFL in Liberia and Foday Sankoh of RUF in Sierra Leone are examples of how resource wealth can limit incentives on the way to peace settlements.

The fourth way in which natural resources extend the conflict period is increased actors that are local, and who aim to take advantage of the mess. These are the stakeholders who appear at times of conflict and exploit the resources wealth to gain individual or group profit (Kawamoto, 2012). This has been particularly witnessed in the war in Liberia and DRC. And finally, the availability of natural resources encourages foreign intervention. The military contractors and the neighbouring nations usually get into warring areas with the motive of taking advantage of the natural resources found there. This outside concern may make conflict dynamics difficult and stretch instability (Kawamoto, 2012).

Besides providing fuel to conflicts, NR can equally prove important in making them a resolution. Their work on peace is based on three key factors (Ahmadia *et al.,* 2022). The first one is the contribution of the resources towards the conflict. The resolution may take a clear and mutually satisfying agreement that is negotiated or forcefully imposed upon the way these resources are going to be utilised after the conflict. Ane example is how diamonds contributed towards conflict resolution in Sierra Leone. Second is the magnitude of the destruction of the environment due to the war.

Peacebuilding in highly hit regions should also incorporate strategies of restoring deteriorated eco systems, as it was the case in post war Liberia (Gallo-Cruz *et al.,* 2021). The third aspect is the level of third-party mediation. The international actors may also dictate the manner in which the NRs are handled at times, which can facilitate peace. An example of historical intervention is that of Britain in Zimbabwe´ liberation war, where certain conditions

were placed on land management during negotiations although these later sparked fresh conflicts (Mvundura, 2025).

Natural resources can stabilize once a peace agreement has been signed (Bruch *et al*., 2019). In other instances, key resource management becomes an ingredient in the application of the peace accords. An example is in Sierra Laone where Foday Sankoh, the rebel leader was made the head of the mineral resource commission under the 1999 Lomé Agreement. It was hoped that by allowing him to exercise authority in the management of the resources of the country, his forces would be persuaded to abide by the peace accord. This strategy did not work, though, with Sankoh failing to secure the agreement being enforced and making the agreement structure to be criticised by numerous researchers (Kaifala, 2016).

Based on the literature reviewed it is clear that governance, natural resources and conflict are intertwined throughout the African context. Gender roles, norms and inequalities further determine these dynamics and how various groups gain access, utilize and control natural resources. Although the vast majority of the literature has reviewed such linkages in a broad way, gendered dimensions are under-researched both in the academic and policy discourse (Bhattacharyya et al., 2021). This paper maintains that gender should be incorporated in NRCM to appreciate the causes and effects of conflict especially on the local level. In order to identify with the River Rongai area, the study assesses the role of gender in daily interaction with the natural resources, vulnerability pattern, and community reaction to conflict. This background helps in providing a background to the following chapters. These seek to dig deeper into these intersections and add to a more inclusive picture of gender aspects of NRCM.

2.2.3 Natural Resource Conflicts Management in Kenya

Kenya has struggled with disputes concerning the utilisation and management of the natural resources including water, forests, land, and minerals (Ombara, 2021). These resource based conflicts are mostly delicate since they are issues that directly impact on the livelihoods and even the existence of people. (Robinson, 2016). Natural resources are very relied upon by many people particularly in the rural regions to support their daily livelihoods as well as their economic engagements. The renewable and non-renewable resources both have the possibility of initiating conflict. Among the resources most associated with eruption of violence are the renewable resources like arable land, freshwater, firewood and fisheries. The central sources of the protracted conflicts have also been non-renewable resources (such as petroleum and mineral deposits) (Robinson, 2016).

One of the factors that have been impacting the intensification of such conflicts is the lack or ineffectiveness of local and gender sensitive conflict resolution mechanisms. Conflicts

that arise in most cases between various interest groups such as communities and individuals in a location, government institutions, and non-governmental civil societies on the modalities of tapping, utilizing, and sharing natural resources are always there. When these conflicts are not addressed, they may result in violent encounters, increase population degradation, and destabilise livelihoods further (Bayu et al., 2020).

A gender inclusive method of NRM, especially at the grassroots level offers give room to effective participation of the local communities as the community members possess an initial experience and perception of the problems. Due to this reason, this paper advocates the use of conflict management systems that place more emphasis on community involvement and gender sensitive. In most occasions it has been formal litigation, which is often a state led orientation and in which the affected populations are usually not given a chance to participate in the process of sustainable peace building. It is not only because of its coercive aspect but also because of the complexities of the procedure that may obstruct its practical usefulness (Day et al., 2021).

Day et al. (2021) note that the national legal systems have been subject to criticism because of a number of deficiencies until recently. These are poor accessibility of these services to the poor, women, marginalised populations and remote populations. The high prices, geographical location, language, political, and lack of literacy are some of the barriers that make these groups unable to access the state legal system. Moreover, legal frameworks, which are based on states, often ignore traditional systems of knowledge, local systems of governance and long-term interests of the community. The technical and opponent character of judicial procedures inevitably leads to win-lose cases and inhibits the participatory decision-making process. Such problems like absence of judicial autonomy, corruption and hegemony of elite players also erode the fairness and inclusiveness of legal processes. Specialised legal language also favours those involved in the government, as opposed to communities at the grassroots (Day et al., 2021).

A gender inclusive approach is crucial in dealing with the natural resource conflicts effectively and in a fair manner. Such strategies promote harmonization of power dynamics, the alignment of divergent interests and promote manageable expectations among disputing parties. Gender issues can help to build peaceful societies where no community takes advantage of its power to marginalise or silence other groups (Schirch, 2022).

2.3 Water Based Conflicts

The issue of water has been a conflict factor, and it has been a part of a larger conflict and not the only reason to start a war (Gleick, 1992; Angelakis et al., 2021). Water is commonly a source of conflict, as access to, and control over resources are the commonly recurrent,

violent, conflict environments based on a territorial, political, or economic interest. Angelakis et al. (2021), believe that water can be weaponised either by deprivation or contamination, or by strategic diversion, which causes harm to communities in competition.

Modern and historical water-related crises tend to be rooted in the disagreement over the borders, diversion of rivers, water flooding due to the infrastructure, and the unstable situation in the geopolitical sphere (Angelakis et al., 2021). The world has recently recorded the loss of more human lives associated with water war than any other natural calamity which is why it is very essential to reconsider water management. This paper thus studied past and present conflicts over water use in River Rongai and delved on gendered solutions that help in facilitating equal and sustainable use of water resource in the area.

Water is also a basic means of livelihoods (Doring, 2020). Fresh water is, however, not evenly distributed hence there are shortages in certain regions. The population action international (PAI) indicates that water shortages arise when the renewable water supplies are less than 1,000 m3 per capita. Fresh water sustains the ecological systems and it is significant in agriculture, energy generation, sanitation, industrial sector as well as personal health. Although it is important, there is still an uneven distribution of fresh water, and as a result, access to it is not the same in all regions (Osman et al., 2023). Water accessibility on the water-scarce areas becomes very competitive, and such may be regarded as a matter of national security.

The demand of fresh water has increased with the rising population of people and better living standards across the world. This pressure is further increased by climate change that makes water supply more unpredictable and variable. The above reasons make water not only a resource of great value but also a source of conflict particularly in areas where water resources are shared by more than one state or community. A survey conducted by the World Health Organization (WHO) and UNICEF jointly revealed that between 1980 and 2015, around 75 thousand people were killed in the course of water-related conflicts, which is more than the average number of people killed in the course of the natural disasters (63,000) in the same timeframe (Mishra, 2023).

The use of water as a source of conflict and as a weapon has existed historically where numerous examples of shared freshwater systems disputed among states exist. Transboundary water resources are geopolitically sensitive and, therefore, any unresolved conflict over their access and control may result in violent conflicts. This means that the governance and administration of fresh water has become a major concern in the international peace and security agendas. With these threats in place, researchers and policymakers state the

importance of early warning mechanisms, inclusive water governance structures, and far-reaching policy mechanisms to avoid conflicts over water. The institutional capacities and improvement of the equitable water-sharing agreements are the necessary steps that would guarantee that water would be a source of cooperation rather than conflict (Osman et al., 2023).

Pollution and environmental degradation, which are caused by human activities often increase water conflicts. The release of industrial effluent, surface runoffs in agricultural processes, soil erosion as a result of improper land use, and the change in river flows through the construction of dams and canals are all significant. Such alterations reduce the downstream water quantity or quality, and thus impact the agriculture, fisheries, and domestic water use (Akhtar et al., 2021).

A prominent example of transboundary water conflict is the India-Bangladesh dispute regarding the River Ganges. The construction of the Farakka Barrage by India in 1975 substantially decreased water flow into Bangladesh, adversely affecting its agriculture and water supply. This led to conflicts and challenges, including food insecurity and migration of Bangladeshis to India in search of better water access (Punjabi *et al.,* 2019).

Similarly, it has become more common to witness water-related conflict in various parts of Kenya. There is a growing tension that many proposed structural developments by individuals and governments will continue to act as hindrance to access water and other livelihood activities (Jeil *et al*, 2020). Murangá residents in Central Kenya for example have on many occasions faulted the government´s plan to construct the northern water collector tunnel, claiming that the project will only benefit community members from neighbouring counties and not them (Maina, 2020).

It could be said that water, in essence, should promote cooperation rather than conflicts. This is evident from the numerous treaties and agreements that have been established in response to water-related conflicts that have mostly been catalogued by FAO (Salman *et al*., 2021). Further, Salman argued that for any kind of development to take place where water sources are shared, the communities or stakeholders involved have no other choice but to share that water. One such treaty was established in 1997 by the United Nations Convention on Non-Navigational Uses of International Watercourses, commonly known as UN Watercourses. The convention outlined important principles that all nations under the UN are expected to follow as per shared waterways; equitable and reasonable use and the obligation not to cause significant harm to neighbours (Salman *et al*., 2021).

Certain treaties have unwillingly increased the conflict between the upstream and downstream water users. Convention on the Non-Navigational Uses of International

Watercourses of 1997 e.g., has been criticized because of its ambivalence on critical matters, among them being eligibility of water use and settlement of aquatic disputes. As much as the convention promotes fair and justifiable usage of the water resources, it also emphasizes the need to prevent excessive damage to other states (Kaskina, 2022). Kaskina (2022) notes that in the first instance in the event of conflicts, upstream users often use the principle of equitable use when justifying that they are using water, whereas downstream users focus on the need to avoid material harm. Such a conflict in the interpretation causes a tension since the convention does not provide any practical guidelines on how to share the common water resources, which is one of the main points of conflict in most water-related conflicts.

There may be no local treaties or agreements to pre-empt the happening of conflicts in other regions and smaller areas such as the Rongai River. Though River Rongai is a small catchment region compared to other water bodies, it has also been a common source of water and as such, possible that there are agreements between the communities utilizing the water to negotiate conflicts. This paper concentrates on the River Rongai context and is aimed at examining the characteristics of the conflicts between the upstream and downstream users. It looks into whether special water consumption behaviours in these areas have caused disparities, which has generated that there is privilege or inequity. It further examines the level to which such activities lead to either positive or negative effects to users along the various sections of the river, whether this leads to resource-related strains and how these struggles are tackled.

2.4 Gender Roles and Approaches to Management of Natural Resource Conflicts

Natural resource conflict management has historically been silent on gender-specific concerns. As a result, comprehensive gender-sensitive analyses in NRCM remain significantly underdeveloped (Improvement, 2023). By the late 1990s however, some institutions began recognising the importance of integrating gender perspectives into conflict management. International organisations such as the UN have endorsed this through several Security Council Resolutions (S/Res/1325; S/Res/1820; S/Res/1888; S/Res/1960; S/Res/2106; S/Res/212), developing policy recommendations aimed at enhancing gendered aspects of NRCM (Ide *et al*., 2021).

Article 33 of the UN Charter outlines the conflict management approaches to be used internationally. These approaches include negotiation, enquiry, mediation, conciliation, arbitration, judicial settlements, regional arrangements, or other peaceful means chosen by the involved parties. As much as this framework emphasises the importance of resolving disputes through cooperation and peaceful means, gender still remains an underexplored approach in

NRCM research and practice. There is therefore a need to manage natural resource conflict by emphasising the involvement of both men and women especially in Sub-Saharan Africa (Badache, 2022).

Since the adoption of the UN Resolution 1325 on Women, Peace, and Security in 2000, there has been some increased focus on both women's and men´s involvement in peace processes and agreements (Longhurst, 2021). Due to the gender differentiated roles and responsibilities, women have different perspectives and needs to men and can thus provide different analysis and solutions for conflict management (Tuvana *et al*., 2020).

Research has further examined the gendered approach nature of human and natural resource interactions, particularly in post-conflict settings. Some research has shed light on women's and men´s vulnerabilities in accessing and controlling essential resources (Improvement, 2023), and how different knowledge of men and women about NRM can support informed decision-making in CM to the advantage of the whole community. Researchers have been able to demonstrate that the gender role perspective is more suitable for explaining conflict management behaviour (Rahim & Katz, 2020).

Gendered knowledge on natural resources is very instrumental in conflict resolution, especially in the areas experiencing natural resources conflicts (Vinthagen, 2022). Women and men interact with natural resources differently depending on their roles and duties. Women and girls often engage in gathering, transportation and provision of basic household needs like water and firewood. On the other hand, men tend to use natural resources more and exploit them to undertake commercial or income generating activities like agriculture, logging and fishing especially in most developing nations.

Market-oriented approach is evidenced by the fact that in most agricultural systems, men are interested in the production of cash crops that are sold to the export markets (Tarjem et al., 2023). Conversely, the women farmers tend to focus more on food crops that they produce to feed their families and the local communities (Arintyas, 2024). In most developing countries, women are important contributors to food crop production through their contribution to the national food security (Uduji et al., 2024).

Women and girls are charged with all the duties of collecting, carrying, and storing water used domestically such as drinking, cooking, and cleaning in almost all developing scenarios (Crider et al., 2022). Men and boys, in turn, tend to be more engaged in water-related economic processes related to income generation, such as livestock watering and irrigated agriculture (Mulaudzi, 2022).

In forestry and agroforestry, women mostly engage in collecting forest products that can provide sustenance to a household like wild food, medicinal plants, fuelwood and fodder (Robert et al., 2022). A comparative study of 25 countries in Africa, Asia, and Latin America shows that there is always a tendency in men to extract resources that have market value e.g. timber and women are more engaged in harvesting resources that directly satisfy household needs (Ray and Mukherjee, 2022).

Over Forest rights In Central India, the struggle of forest rights arose when the government left out local people to commercial interests. It is this alienation that resulted in mass civil uprisings. One of the most notable was the Chipko Movement, the symbolic movement in the Garhwal hills of Uttarakhand of the 1970s (Malik et al., 2023). It was based on the ideas of non-violence and self-reliance introduced by Gandhi (Verma, 2024). One of the local women, Gaura Devi, organized a peaceful protest by 27 other local women physically hugging trees to stop their cutting down. Such resistance that is symbolic of the Chipko Movement (Pandey et al., 2025). The women who exhibited their leadership and courage were especially important: such women as Gaura Devi were going against the customs of gender roles. Indicatively, the Baiga women claimed their rights to forest resources.

The Chipko Movement emerged as the result of the long-term communication between the environmental activists and the local communities, which were the most influenced by the ecological degradation. Women were in the centre stage since they were directly affected by the frequent floods, landslides, and deforestations. Women, being the primary caregivers in charge of the farming, animals and housekeeping, had a subtle perception of the interplay between the environment destruction and survival of the family. They were involved on the basis of their lived experience of loss and the resilience. Despite the fact that women were the leading force of the movement, the role of men was not insignificant. Particular activists like Chandi Prasad Bhatt and Sundarlal Bahuguna played a significant part in gaining wider support by involving the policymakers. They worked in collaboration with women to promote the environmental agenda and forest ecosystems protection (Bajoria et al., 2021).

Why gender role is still not well represented in NRCM discourse? To adopt a gender-sensitive approach, it is important to investigate how the social role and norms construct the experiences of both sexes, not only in the context of the local community but also at the international level (Tamunomiegbam, 2024). It is more of a question then of realizing the applicability of gender and the reason as to why it remains marginalized in practice.

Considering gender sensitive solutions to CM, (Ronderos, 2024), go through literature and institutional practice concerning women participation in conflict prevention, conflict

resolution, and post-conflict reconstruction. He finds a key problem that effective gender-inclusive peacebuilding activities could not be made without policy promises being converted into visible practices. This involves the establishment of qualitative and quantitative goals and systems of frequent monitoring and assessment. Ronderos also highlights the importance of holding the government accountable in cases where they fail to meet the international gender related commitments as was the case in the UN Security Council Resolution 1325. Similarly, Hirblinger and Landau (2020) encourage gender perspective integration into programs and institutions that regulate the conflict management process arguing that those methods are key to inclusive and sustainable peace.

National Gender Policy (2015) of Ghana offers a framework on which efforts to attain gender inequalities should be conducted on the inclusion of both genders, boys and girls in promoting inclusion of both genders. The policy is aimed at breaking in the established socio-cultural habits that hinder women empowerment, specifically ending violence against women and girls and ensuring more equal gender practices in homes and in the general community. Moreover, the Ghanaian National Action Plans (GHANAP I and II) directly deal with the gender dynamics of conflict management that should be promoted to involve women and men in the peacebuilding and conflict management process (Aikins et al., 2024).

The experiences of women in NRC situations are typified by vulnerabilities that revolve around day-to-day living in their societies. One major point is that there is the heightened exposure to gender-based violence (GBV) and domestic violence when there is a conflict and transition. This violence is often privatized and is often thought to go unnoticed when conducting peacebuilding and post-conflict reconstruction operations (Kovac, 2024). The other area is the gendered vulnerabilities of the division of labour. Women are exposed to violence risks in the course of their livelihood practices in most conflict-prone environments especially where they interact with natural resources (Khandker, 2020). Indicatively, in the DRC, women have been identified to be most susceptible to attacks as they walk to markets or in the fields, where gathering firewood, a chore mostly given to women, compels them to venture into the remote or warring locations, endangering them to assaults by rebel forces, militia, or even government forces, based on the circumstances (Selebogo, 2020).

The analysis of gender will require the knowledge of unique roles and norms of men and women in particular communities (Pierson, 2019). Sexual violence especially rape is often cited in the analysis of GBV in conflict settings as the most serious harm that women suffer (Griffiths, 2020). In his explanation of this problem being critical and thus requiring attention in the field of justice, Griffiths (2020) notes that efforts like such a narrow one tend to ignore

other aspects of how women are impacted by conflict. Moreover this view might fail to capture cases of SGBV of men that are underreported and under addressed (Griffiths, 2020).

The issue of women involvement in the areas that used to be viewed as male, like illegal mining and other types of natural resource exploitation, is often neglected (Mengba et al., 2022). Women can also be directly engaged in the extraction process, cook, transactional partners, or even put through exploitative relationships dressed as marriage in artisanal and small-scale mining operations. These gendered aspects of natural resource conflicts should be identified to formulate comprehensive conflict management and conflict resolution plans that are inclusive (Adjei, 2019).

Water scarcity down the river Rongai area impacts women disproportionately. Reduced water levels force them to move further in a quest to find water to support the household and agricultural demands. This added weight subjects women to physical exhaustion and insecurity, and possible violence. Similar to the dangers of the firewood collection activity in the DRC, the process of finding water exposes women to an increased risk of harassment, assault, or other gender-based violence.

Though the women in the Rongai region might not be engaged directly in active struggle like using machetes, blocking roads, and devastating crops and farm machinery, they still feel the impact of the unrest immensely. Their duties of taking care of the home such as cooking, looking after and securing the survival of the family during times of conflict make them susceptible as they can easily be indirect players in the conflict of the natural resources.

By highlighting these gendered risks, this study emphasised the necessity of gender-responsive conflict management strategies that address the specific vulnerabilities faced by both women and men due to their resource-related roles. Integrating gender-sensitive policies in NRCM can help mitigate these risks by ensuring safer access to essential resources, promoting inclusive decision-making, and reducing the structural inequalities that perpetuate gendered insecurity in NRC settings (Wakenge, 2021).

This study builds on the fact that men and women possess overlapping but, in some ways, different knowledge and experience about water sources, land use and sustainable environmental practices. It is therefore important to make explicit the insights of both men and women vis-à-vis resource management policies. That being the case, it follows that both women's and men´s experiences should inform negotiations around water as a resource use by balancing the local needs, livelihoods and investment-driven development, such as case flower farms, fruit farms and other water-intensive operations. Harnessing these gendered approaches

is more likely than to develop natural resource conflict management strategies that are not only inclusive for the sake of 'being inclusive.' They are more likely to be effective and lasting.

2.5 Gendered Challenges in Natural Resource Conflict Management

In the academic sources relating to gender mainstreaming in conflict management process and peace building activities, it has been pointed out that the process of enhancing the presence of women in public decision making may at times have a backlash in the domestic domain. Such initiatives have been associated with an increase in domestic tensions in different contexts by women participating in natural resource management and conflict resolution efforts, which are opposed or disapproved by spouses and other family members (Juncos et al., 2022). Such responses can often be explained by the attitude that the open activity of women interferes with the traditional gender roles, especially in the situations when the patriarchal values are strong. Moreover, such processes may overburden women with household chores because they are supposed to serve at home and at the same time play new roles in communities. The result of such outcomes is usually normalised. Based on ecofeminist approach, Agarwal (2010) argues that more scrutiny is needed, especially on how the development and execution of the programs may be re-organized in order to support gender inequality, without affecting the aim of gender change.

The dominant gender ideology has made men the breadwinners and guardians of their families. This is a socially created role, which puts pressure on men to establish their dominance on crucial natural resources such as land and water. The literature on the subject underlines that, such expectations usually make men take a competitive or confrontational approach to resource-deprived surroundings (Hussein et al., 2024). When there is a conflict in accessing resources, men often use destructive behaviours, including forceful pressure, or physical engagement with other groups as a provider (Brown, 2021). These acts escalate the tensions between groups and put men at the risk of being injured or killed. This gendering relationship goes to show that masculinities are involved in conflicts over natural resources patterns and justifies the necessity of conflict management strategies that are gender sensitive.

In NRCM, the issue of gender analysis often revolves around the relationship between men and women. Nevertheless, researchers are raising increasing concerns about the need to acknowledge social distinction among such categories, especially among women. The age, ethnicity, marital status, education, religion, and socio-economic status also have substantial influence on women and their access to resources and involvement in NRCM (Das, 2022). Literature also suggests that gender-specific interventions can unreasonably raise the voice of privileged women like older, married women, women with higher education or women in

recognised women organisations. As a result, the lives and the needs of other women not belonging to these groups are sometimes disregarded. Participation is usually arranged geographically like village or locality with little regard to overlapping identities that influence women experiences. This habit is also likely to ostracize younger women, women of lower education level, or women of minority ethnic or religious affiliations.

Another issue regarding gender-responsive management of natural resource conflict is the quality of the women participation. Despite the event of women representation in peace committees being a positive step, in most cases, there is a lack of a balanced representation of women in appointing and when only one or two women sit in a peace committee, then there is no meaning to the involvement and decision-making processes of that voice. Thus, the long-term strategies and policies need to proceed to the next stage of not only symbolic inclusion but also transformative participation (Ogega, 2022).

2.6 Theoretical Framework

The theoretical framework which will be employed in this study is founded upon two complementary approaches, i.e. the Thomas-Kilmann Conflict Mode Instrument (TKI) and feminist views of conflict management. Collectively, the frameworks provide a platform through which the impacts of gender roles, social norms, and behavioural inclinations on natural resources conflict management (NRCM) may be analysed within the River Rongai region.

2.6.1 The Thomas-Kilmann Conflict Mode Instrument

Kenneth Thomas and Ralph Kilmann came up with the TKI model in 1974. This paper has employed TKI to examine the behavioural patterns of people and groups in the natural resource conflict management in the River Rongai catchment. TKI provides a set of rules of interpretation of interpersonal and group-level conflict reactions, particularly in cases of resources scarcity and conflicting livelihood. The model breaks down the conceptualisation of conflict management behaviours into two main dimensions, which are; Assertiveness - the extent in which the individual pursues to ensure the need(s) of the individual are met; and Cooperativeness - the extent to which the person is interested in fulfilling the interests of others.

These dimensions present the basis of determining five main conflict-handling modes, which include Competing, Accommodating, Avoiding, Collaborating and Compromising. Such modes can be regarded as being applicable based on the circumstance and the character of the conflict. In the context of natural resource conflicts, where some competing needs of water, land and livelihoods often overlap, knowledge of these conflict handling styles allows one to analyse the gendered and structural dynamics of conflict handling through the

community-based conflict resolution. Competing (high assertiveness, low cooperativeness) is typified by power-focused plans, which may be frequent in conflict situations in which either side of the conflict seeks power over decision making or power over the resources.

Accommodating (low assertiveness, high cooperativeness) involves compromise to the needs of other people, at times at their own cost, a characteristic that the marginalised groups made a priority over confrontation and instead social cohesion. Avoidance (low assertiveness, low cooperativeness) indicates withdrawal behaviour of conflict situations, which might arise in those environments where power inequality or social norms do not encourage open interaction especially among women or social minorities.

Collaborating (high assertiveness, high cooperativeness) seeks integrative solutions that satisfy all parties, and is ideal to community peacebuilding and participatory decision-making, such as through peace committees compromising (moderate assertiveness and cooperativeness) involves mutual concession, which is often used when urgent, practical solutions are needed for instance, rotational water use or informal water-sharing pacts.

While men and women are equally capable of employing all five conflict management styles, no one can be definitively classified as having a single, fixed approach to managing conflict. Rather, people tend to prefer and rely on certain styles over others, often due to their personality, socialisation, or previous experiences (Manyak *et al*., 2010).

In the context of NRCM, particularly within community settings like the River Rongai catchment, men and women whose predispositions align with more assertive or passive modes such as Competing or Avoiding may find it challenging to shift toward more cooperative and participatory approaches. However, this transition is often necessary for effective community-based resource governance, as sustainable conflict resolution depends on dialogue, mutual understanding, and collaborative decision-making.

These five styles are summarized in the figure below.

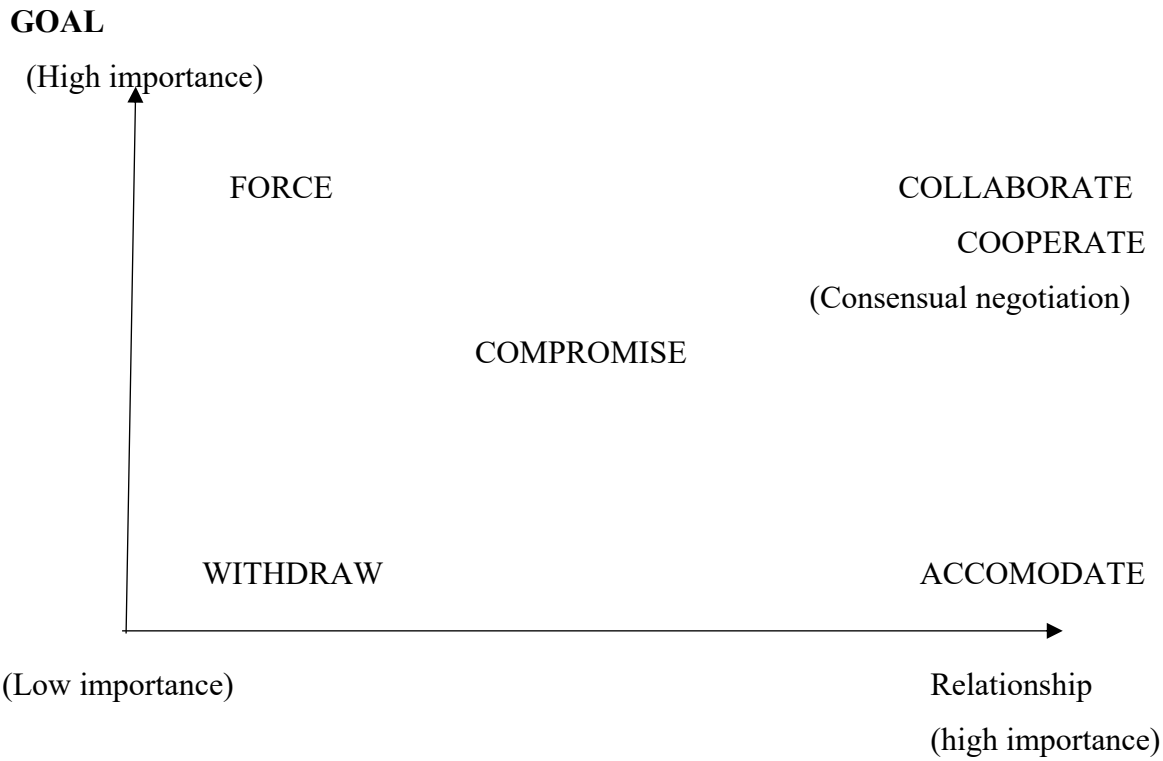

Figure 2.1: Conflict Management Styles: Source: Adapted from TKI (Scott, 2022)

2.6.2 Feminist Environmentalism

This study draws on Bina Agarwal's concept of feminist environmentalism to understand the gendered dynamics of natural resource conflict management. Agarwal (1992) argues that the relationship between people and the environment must be understood through their material realities particularly how labour, property and power are divided along gender lines. Agarwal further states that, in rural contexts, women often engage directly with NR such as water, firewood, and land through their daily responsibilities. This interaction gives them a unique knowledge of those resources. At the same time, natural resource conflicts, environmental degradation such as deforestation, water scarcity, or pollution tends to affect them disproportionately due to their reliance on these resources.

In the case of the River Rongai catchment, natural resource-based conflicts over water access are mainly structured by access to water as a resource and gendered patterns of labour. Feminist environmentalism helps illuminate how men and women in communities are not only more vulnerable to resource access disruptions but are also central to local strategies of adaptation, resource sharing and peacebuilding (Kaol, 2020). This framework emphasises the need to address both the control of natural resources (by dominant groups) and the ideological systems that define gender roles and exclude either men or women from decision-making in conflict management (Olaitan, 2023). Therefore, feminist environmentalism provides a

grounded approach for examining how gender, resource access, and natural resource governance intersect in natural resource conflict management.

Both the TKI and the feminist environmentalism theories put a lot of stress on equal participation within the gender lines and therefore offer a form of guidance in evaluating the gendered perspective of managing the conflict in the River Rongai catchment. These hypothetical lenses help to explore the engagement of men and women with conflict resolution processes, experience, and influence conflict resolution processes and how these gendered patterns can contribute to the overall objective of sustainable natural resource governance.

2.7 Conceptual Framework

This framework assisted in analysing the aspects of gender influence in access and control to NRCM approaches. Figure 2.2, indicates the association between the independent variable (IV) and dependent variable (DV). Conflict management in this study was taken as a dependent variable whereas gendered participation, socio-cultural norms, economic status, education levels, legal framework, and resource access were taken as independent variables.

Gendered participation influences the conflict management in that it dictates how much men and women participate in the decision making, negotiation and resolving processes. Socio-cultural attitudes shape the power relations and often constrain women engagement to formal structures of conflict resolution systems. Economic status and education determine the ability of individuals to engage in the effective activity since financial independence and knowledge increases CM skills. Policies are made to be more or less inclusive by legal structures that promote equality between the genders or restrict it, ensuring that people are more likely to have a hand in conflict management by having access to resources such as training and finance among the others. Whenever these factors are favourably oriented, there will be inclusivity, participatory and effective conflict management that favours NRCM.

Besides the DV and IV, intervening variables also determine the extent to which independent variables affect conflict management. Gender-inclusive conflict management can be either influenced or hindered by institutional support and policy implementation, based on whether legal and policy frameworks are effectively implemented or not. Local perceptions and acceptance of gendered participation are also influenced by the community engagement and awareness and, therefore, affect the success of the inclusive conflict resolution efforts.

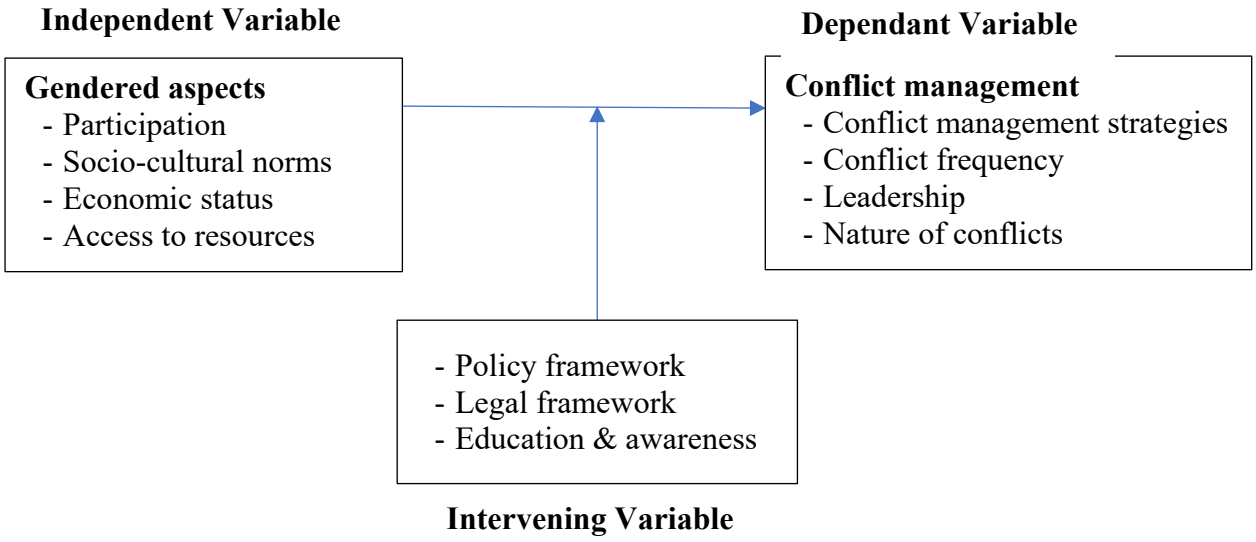

Figure 1.2: Conceptual Framework

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The chapter gives the data collection and analysis methodologies. It provides a description of the research design, research location, population of study, sampling procedures and sample, research tools, data collection procedures, data analysis procedures and ethics.

3.2 Research Design

A research design offers the outline of collecting, measuring, and analysing data (Bell, 2018). The research design used in this study was explanatory sequential mixed methods, which involved the gathering and analysis of quantitative data in the first phase, and then the gathering and analysis of qualitative data to explain the first findings and develop those (Creswell et al., 2018). This method was suitable in the River Rongai area research since it would enable a preliminary examination of the trends and associations concerning gendered management of natural resources conflict through an organised survey and then a thorough qualitative analysis of the same will be conducted on the basis of interviews, participant observation and focus group discussions. The sequential design allowed to understand the quantifiable tendencies more profoundly as well as lived experience of gendered experiences of NRCM.

3.3 Study Area

The research was carried out along the river Rongai in Rongai constituency which is a sub-county in Nakuru County and is in the central region of the Kenya great valley with an area of about 7,505 km 2. The River Rongai region was chosen due to the history of water conflicts recorded in the area which made it the right region to study natural resource conflict management and justify the relevance in this study (Cherotich, 2022). The constituency is between longitudes of 35 24 36 24E and 36 36 0124E and latitudes of 01348N and 193601S of the equator.

The sample sites that were selected were Salgaa which is in the upstream at 1920 meters, and the latitude of the sample site is 0.216 and the longitude of the sample site is 35.864. Kirangari is the midstream region, which has an altitude of 1,844 meters, the latitude is 0.146, and the longitude is 35.897. Finally, Makongeni location, which is downstream, has an altitude of 1 714 meter, a latitude of 0.101 and a longitude of 35.933 (Mukanoheri et al., 2023). At the Mogotio sisal estate at Alphega area, the River Rongai empties into the Molo River.

Different climate and environmental features characterise the area (Kihangi, 2000). The forests prevail at the upper catchment areas at the Mau Escarpment. They consist of native trees

such as Podocarpus gracilior, Croton megalocarpus, trees, and plantations of alien trees, such as Eucalyptus salgina (Mukanoheri et al., 2023), which are planted as a source of timber and agro forest. These forests also act as water catchments to the River Rongai and its tributaries, and they also act as habitats to wildlife species (Cherotich, 2022).

Further to the south, the vegetation becomes open pasture and bushland and farming activities become more pronounced. The midstream and lower regions are where crops, including maize, potatoes, beans, and wheat, are grown, livestock rearing is also prevalent in these regions, particularly in the lower catchment that is mostly semi-arid (Kimwaki, 2020).

Kimwaki (2020) Rongai has a bimodal rainfall pattern, with the long rains usually happening during the months between March and May and brief rains between October and November. The rainfall in the catchment is considerably different with the highlands having a yearly rainfall of more than 1,500mm and the lower semi-arid areas having an annual rainfall of up to 700mm. The weather is also usually cool in the months of July and August and the highlands have an average temperature of between 12°C and 20°C whereas the lower catchment has the highest temperature reaching up to 30 o C during the months of February and March (Michura et al., 2019).

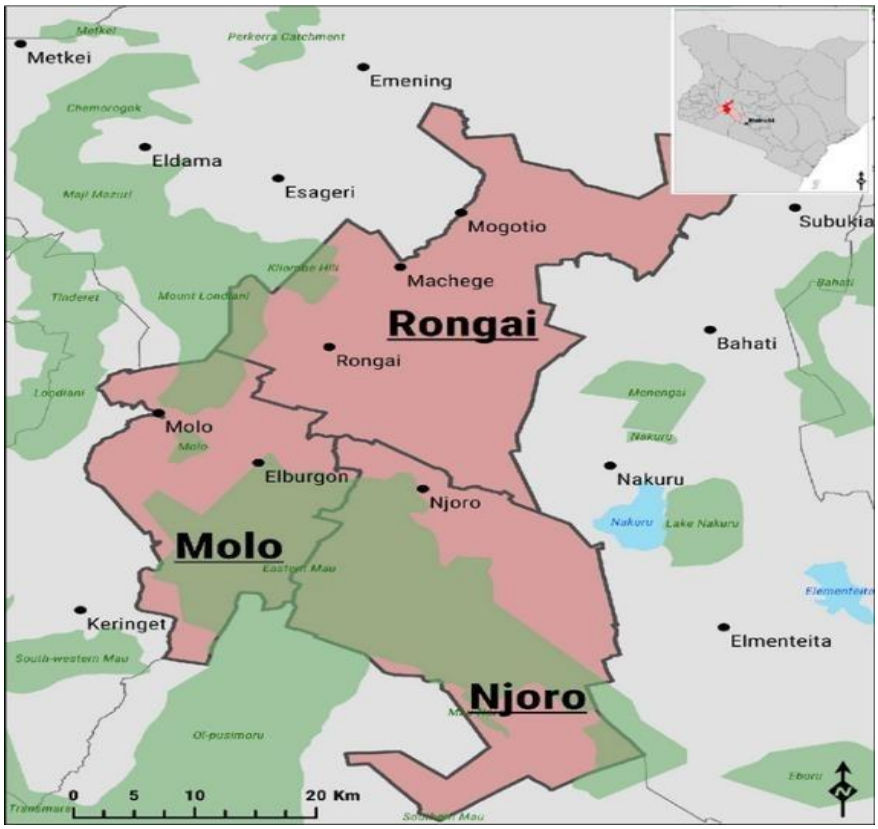

Figure 2.1: Map of Study Area

Source: Mukanoheri *et al*. (2023)

3.4 Population of the Study Area

The study population comprised male and female residents of 18 years and above in River Rongai area, Nakuru County. According to the Kenya National Bureau of Statistics (KNBS, 2019), Rongai constituency has a total population of approximately 199,467 people over 18, 46% men and 54% women. The target population was 3,311 River Rongai water users. comprising c.3,000 households, 311 commercial farmers (Nakuru County Integrated Development Plan (CIDP, 2023).

3.4 Sample Size Determination

To determine the sample size, the formula by Nassiuma (2000), was used because the number of the target population was known.

$$n = Nc^2 / (c^2 + (N-1)\ e^2)$$

Where,

n = sample size

N= total population size

CC = coefficient of variation 0.38

ee = standard error 0.03

therefore n =5,801(0.3) ^{2}/0.3^2+ (3,311-1)0.03^2 = 154

A sample size of 154 respondents was determined using the above formula. To account for potential non-responses, an additional 10% (15 participants) was added in line with Clottey *et al*. (2014), bringing the total to 168 respondents. The study distributed 88 structured questionnaires to community members, conducted five key informant interviews with government officials and community leaders, held five focus group discussions with an average of seven-ten participants each and carried out 14 semi-structured interviews with individuals actively involved in conflict management in Rongai area.

3.5 Sampling Procedure

The study utilised a multistage sampling method, which was appropriate given the geographical spread of the population and the involvement of diverse stakeholder groups in conflict management. In the first stage, the study area was stratified geographically into upstream, midstream, and downstream sections. In the second stage, stakeholder categories-households and commercial farmers were used as additional strata. Within each stratum, simple random sampling along the river was used to select household respondents. The researcher walked from a central point in each area of the catchment and where people were present in a household that house was selected. This process continued until 43 household had been

selected, with the additional caveat of ensuring gender balance by alternating between men and women during selection.

In the last stage, purposive sampling was utilized in selecting key informants such as community leaders and government officials through their ability to understand the concept of conflict management through their knowledge and experience (Neuman, 2006). The participants of the focus groups also had a purposive selection done among the well-established community groups to give representation to various views.

3.6 Data Collection Methods

In the given order, participant observation, focus group discussions (FGDs), and interviews were employed as three complementary data gathering methods that were used in methodological triangulation (Bell, 2018). Such a multi-method enabled greater validity and reliability of the study. Validity is a concept that involves the degree to which the research tools measure what they are expected to measure whereas reliability is a concept that tests the consistency and stability of data collection process with time and respondents. The application of these techniques has helped the researcher to comprehensively get the insights, opinions, attitudes, emotions and knowledge of the research population by analysing a representative sample.

3.6.1 Participant Observation

The method of qualitative research used in this study is participant observation whereby the researcher takes part in the daily life circumstances of the community (Brewer, 2000). The information was gathered using the listening and observing methods, questioning and attempting to make sense of the life of the community by observing the social life and activities of the community (Brewer, 2000). The researcher participated in the activities of the community daily noting the use of NR and CM practices. Particular tasks involved offering farmers aid in digging and harvesting maize and vegetables, aiding women in collecting water in village water points, and sand harvesting and walking with cattle grazers. The researcher also used to visit the community meetings, church and market days where she joined women sellers in selling the produce. These relations provided embodied realities of the access of genders and social influences to water and to the settlement of disputes.

3.6.2 Focus Group Discussions (FGDs)

Focus group discussions constitute a qualitative research method involving a small group of members (e.g. 6 -10) of the various groups discussing selected topics over a pre-determined period (e.g. 60 -90 minutes) in a group discussion (Drayton and Tynan, 1988). In

this research, the participants of the five FGDs were ranging between 7 and 10 participants, which made the FGD participants to be 42. The discussions were structured to include different views in terms of gender and age with each group consisting of men, women, the young people and a combination of men and women. The sample was chosen out of their desire to take part in the study as well as to be directly or indirectly engaged in the natural resource management and conflict solution in the River Rongai. Both FGDs were held in a community location, either in particular shade of a tree or a local meeting room. These sessions were open participatory moderated whereby, the researcher facilitated the discussion but left the participants to narrate freely their experiences, perceptions and proposals on how to control conflicts and water governance within the region.

3.6.3 Questionnaire

The research undertook the survey interviews, which were informed by a series of pre-determined yet open-ended questions (Appendix 4). These open-ended questions gave the respondent an opportunity to expound themselves depending on what they have experienced in life and what they know about the conflict dynamics in the River Rongai catchment (Oladipo et al., 2015). The interviews were done in a natural environment like farms, around water pools, or at market place where the participants were at work or reside where they were comfortable and could carry on with their daily routines without disruption. This approach proved to be helpful especially in the recording of quantitative and qualitative data.

3.6.4 Semi-Structured Interviews

Semi-structured interviews were also carried out and they were based on the open-ended questions which enabled the participants to recount their experiences and views at will (Oladipo et al., 2015). These interviews were done with fourteen people and the majority was cattle herders, small holders, and a roadside bed seller. This approach helped the researcher to come up with first-hand information of day to day accommodation with natural resources, perceptions of water related conflicts, and lived experiences with the current conflict resolution systems in the River Rongai water catchment.

3.6.5 Key Informants' Interviews

The paper under review carried out five Key Informant Interviews (KIIs) with the chosen stakeholders that have direct interest in NRCM within the River Rongai catchment. These were the Chiefs of the upper (Salgaa area) and lower (Makongeni area) catchment area, the Chairperson of the local Peace Committee, the Chairperson of the Water Resource Users Association (WRUA) and a community based social worker. The semi-structured interview guide (Appendix 1) guided the KIIs and gave them flexibility and consistency in interviews.

The approach was quite appropriate to the research, as it helped the scholar to collect detailed information on the local governments, traditional and formal conflict resolution systems and the gendered nature of the way people participate in NRCM. The information and experience of these informants helped in gaining insight into the gendered issues, activities and the possibilities of controlling water-related disputes in the society.

3.7 Validity and Reliability of the Research Instruments

The pilot study was done at River El-Molo catchment area that borders on River Rongai catchment to determine the clarity, validity and reliability of the research instruments before starting the actual fieldwork. River El-Molo was chosen because of geographical location and socio-ecological similarity with River Rongai. Similar to River Rongai, it is typified by livelihoods that rely on natural resources especially small scale farming, large scale farming, sand harvesting and keeping livestock. The Molo catchment suffers seasonal water management clashes fuelled by rivalry over water, land utilization stressors as well as pollution.

The general rule of 10% to 20% of test data collection tools as appropriate guide suggested to the pilot the total sample to be used in the study. Thirteen respondents (20 percent of the target population of the main study) were picked to participate in the pilot. The chosen respondents represented the socio-economic groups, which formed the core of the study population within River Rongai catchment.

Structured questionnaires, KII guides, and FGD were used as the instruments. The researcher checked the instruments after testing them in the field with consultation with supervisors and experts to determine its contextual relevance and convenience to understand. In order to make it culturally and linguistically intelligible, minor changes were undertaken to make the phrasing better, rearrange the order and the relevance of some questions.

The test of reliability was conducted through the use of the Cronbachs Alpha, the coefficient was 0.73, and it is more than the minimum 0.70 coefficient of internal consistency (Nunnally & Bernstein, 1994). In addition, pre testing on a smaller sub-sample in the River Rongai region was also performed to ensure that it is consistent and relevant so that the researcher can make amends to the tools following the feedback of the participants.

Such pilot work played a significant role in finding the possible gaps in the tools and enhancing the accuracy of data collection. It further confirmed that the causes of conflict in River El-Molo especially unregulated water abstraction, dry-season scarcity as well as land degradation were comparable to those expected in the River Rongai study site confirming the transferability of the research instruments and applicability.

3.8 Methods of Data Analysis

Field gathered data were treated systematically courtesy of complete checks in terms of completeness, uniformity as well as rationality of answers. The objectives of the study were put into the analysis and both quantitative and qualitative research methods were adopted to provide a comprehensive interpretation of the results (Lu et al., 2004).

The quantitative data, especially, household interviews were analysed with descriptive statistics, including frequencies, percentages, and cross-tabulations, which were calculated with the help of SPSS Version 25. These findings have been given in the form of tables, and pie charts to make it easier to read and compare.

Transcription of qualitative data was carried out by FGDs, KIIs and Participant Observation and translated where needed and thematised. Similar patterns and recurring phrases and emerging themes were found and grouped into themes based on the study objectives. Respondent quotes (anonymised and coded) were provided as additional material to enhance the analysis and give the information about the lived experiences and the views of community members.

The variability of water resources trends was explained using the observational data that were gathered using the local informants that included the WRUA chairman and the members of the peace committee whose long-term knowledge was used to offer their observations into the land use change and seasonal water run. Change detection was not done on the levels of rivers using remotely sensed data even though a satellite-derived map was used to verify the study area.

3.9 Ethical Considerations

An introduction letter to National Commission for Science, Technology and Innovations ((NACOSTI) was obtained from Egerton University graduate school (Appendix 5). A research permit was obtained from NACOSTI before the commencement of data collection exercise and further approval was sought from the administrative leadership and local authorities in the study area (Appendix 7). Research ethics were upheld throughout the research period as the information collected was strictly for the study and handled with utmost confidentiality (Appendix 6). Participants were informed about the objectives and the purpose of the study. All KIIs and FGDs were recorded digitally to check field notes and undertake content analysis, on the understanding that these would be securely deleted within three months of graduation after the researcher's thesis had its final approval. This undertaking was given orally to all participants and permissions were always secured in advance of any recording or photography to be used before using their images.

CHAPTER FOUR
RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of data and interprets the findings of the study. It discusses the responses to the research questions firstly by presenting the profiles of the demographics of the participants. Thereafter, patterns, themes and sub-themes relevant to the research questions are discussed. These themes and sub themes were elicited from empirical data collected during the interviews.

4.2 Summary of Field Engagements and Participatory Activities

In addition to 12 days of fieldwork in April/May 2025, the researcher participated in three research visits to River Rongai with a larger group from Egerton University as part of external training and in the researcher's capacity as a research assistant with Mind the Gap Research and Training (MtG). Two of these visits involved informal discussions with village elders, women from various community groups, a flower farm representative and a WRUA official (who was also formally interviewed later in the year).

Before the third visit, the researcher took part in a four-day conflict management course, which included a day of fieldwork. During this fieldwork, participants split into small groups to conduct focus group discussions with community members. The researcher, along with three other female participants, facilitated a one-hour focus group with two local women on strategies for reducing water-related conflict and enhancing inclusive natural resource governance. The discussion outcomes were later shared in a summary presentation to the wider group, followed by questions and reflections from other participants.

Table 4.1: Summary of Formal and Participatory Research Engagements in The River Rongai Catchment

Type of Group	No. of Participants	Duration (minutes)	Comments
Focus Group Discussions			
FG 1 (Male-only)	10	60	Men from lower and mid-catchment areas
FG 2 (Female-only)	6	85	Women traders and farmers
FG 3 (Mixed-gender)	9	65	2 women, 5 men from 3 zones
FG 4 (Youth only)	7	90	All male and female members
FG 5 (Mixed gender)	10		
Key Informant Interviews			
Interview 1 (Peace Committee Chairperson)	1	50	Male elder
Interview 2 (Village Elders)	2	25	Male elder
interview 3 (Community Social Worker)	1	90	Female multiple meetings
Interview 4 (WRUA Chairperson)	1	20	Male, had several informal discussions
Participatory Activities and Community Visits (PACV)			
PACV 1 (Markets)	10	10-30	7 traders, I male youth
PACV 2 (Livestock owners)	6	15	Cattle herder (owner)
PACV 3 (River side – labourers)	5	20	Hired cattle herder & water vendor
PACV 4 (Sand Harvesters)	5	45	Youth (13-16yrs); researcher helped to load sand
PACV 5 (Migrant Workers)	10	10	Flower farm workers
Visits to Households and Farms			
HH (Household Visits)	43	20-75	Mostly female, 5 were mixed male/female
Shamba	10	20-90	Included the researcher weeding.

Flower farms (phone interview)	2		
Sub-total	**138**		80 women 58 men
Meetings as part of Professional Short Course Training			
Meeting 1 (19/10/2024)	3	40	Numbers = only those with whom the researcher held direct, face-to- face conversations
Meeting 2 (24/10/2024) (FGD)	11	120+	
Meeting 3 (6/2/2025) (FGD)	2	180+	
Total	**154**		4 women 12 men

4.3 Demographic and Socio-Economic Characteristics of The Respondents

Due to the diverse economic characteristics and roles among community members in the River Rongai water catchment, the responses were classified and analysed based on gender, age, number of dependents, years of experience and socio-economic characteristics.

4.3.1 Gender of Respondents

Of the participants, 54.5% and 45.5% were females and males respectively. The findings indicated that 76 percent of the participants were married and the other participants were single or widowed. Observations and interviews showed that women were more likely to be represented in household interviews and roadside vending whereas men were more likely to participate in physically demanding and other means of livelihood like sand harvesting, cattle herding and tomato farming. This is in agreement with Ogada et al. (2017) that women are viewed as home keepers and support jobs or resource processing. This distribution is a manifestation of gender roles in accessing and using natural resources.

4.3.2 Age Range of the Respondents

Among the respondents of 154, 87.7% respondents fell within the age group of 18-60 years old. Of them 75 were women, 89.3 per cent of all the female respondents, and 60 men, 85.7 per cent of all the male respondents. The 12.3% that was above 60 years was 10.7% women and 14.3% men. This distribution indicates that majority of the participants were in the age bracket of the economically productive age, with the older persons usually holding the advisory or the leaders positions in the society.

Table 4.2: Age Distribution of Respondents Based on Gender

Age Group	No. of Female	% of Female	No. of Male	% of Male
18–60 years	75	89.3	60	85.7
Above 60 years	9	10.7	10	14.3
Total	**84**	**100**	**70**	**100**

4.3.3 Education Level of Respondents

An educational gap between women and men was identified through the study results where women are grossly underrepresented in higher education and that they are overrepresented in the lower levels of education. Such results are in line with those reported by Nwabeze et al. (2012), who reported that most of the people engaged in direct use of natural resources have lower educational attainment in that most of the highly educated engage in formal jobs in the urban centres. One of the factors during inclusiveness and sustainable NRCM is education, which is gendered in terms of offering people with knowledge, communication and skills towards sustainable peace building (Harris et al., 2011).

Table 4.3: Level of Education of Respondents

Education Level		Women		Men	
	Total (n)	n	%	n	%
No Formal Education	23	16	19.0	7	10.0
Primary Education	59	40	47.6	19	27.1
Secondary Education	49	23	27.4	26	37.1
Tertiary Education	23	5	6.0	18	25.7
Total	**154**	**84**	**100**	**70**	**100**

Moreover, findings of the two mixed gender FGDs indicated that most of the respondents had a monthly earnings of KES 10,000 or below, which they said was sufficient to sustain them with the basic needs like food, school fees, and purchasing water. The security of the economy was particularly high in road side sellers, small scale farmers and casual workers including flower farm workers, sand harvesters, and water vendors. Such low-income levels have a direct effect on their susceptibility in the seasons of water shortage that precede NRC, and this further indicates the strain that is exerted on water resources to fulfil domestic and livelihood requirements.

The adults in the River Rongai catchment, both men and women, indicate a high level of economical reliance on a small number of people in the households who are either involved in formal jobs or commercial agriculture. The average household had three to 10 dependents

and this further indicated the strains on the water resources to cater to domestic and livelihood demands.

As opposed to other rural Kenya environments where adult males tend to migrate to seek employment (Haar, 2009), a significant percentage of the total population of men in Rongai tends to stay in the area, which portrays lack of motivation or chance to seek work elsewhere. This can be affected by the fact that the society depends on subsistence livelihoods and the seasonal agricultural incomes. The inert and passive nature of certain groups of youths can be seen as a contributing factor to poverty in the region because most of them are not willing to engage in self-employed economic activities but are instead dependent on parental or household revenues (male only FGD).

The responses were not quite clear on the length of time the men and women respectively had been using water in the River Rongai. Nonetheless, the statistics indicate that the respondents who were of an older age group especially those who were of 60 years and above had spent more time with the river than the younger ones. Agriculturalists and city leaders, particularly in the WRUA and Peace Committee, were the most widespread and long-term users of it. In contrast, younger individuals reported shorter interaction with the river, which may be attributed to recent migration into the area for informal employment in flower farms or the seasonal nature of economic activities such as sand harvesting **and** water vending.

4.4 Water-Based Resource Conflict in the River Rongai Area, Nakuru County

Water level variability in the River Rongai catchment has been observed by long-term residents and local leaders. The NRCs in the River Rongai catchment are predominantly driven by four interrelated causes: water shortage during dry seasons, unregulated water abstraction, land use changes, and pollution of the river.

An interview with one key informant, chairman of the Peace Committee, Rongai constituency, who has lived in the area since the 1970s. According to him, the river experienced relatively stable flows through the 1980s and 1990s. However, from the early 2000s, they began noticing more frequent occurrences of low water levels, particularly during the dry seasons.

> *"(When) I was a young boy in the 70s … I used to swim in the river and take my father's cattle to water. There were no flower farms, no tomato farming, and people farmed far from the riverbank. When the first flower farm was constructed …, many people migrated in, bringing … different economic activities and habits. Slowly, tomato farms began shooting up along the river … people started clearing bushes and forests to create space for cultivation and building. The first conflict I experienced was in 1999, and after that, they*

happened every year especially during dry seasons like January to April and December. The most recent and hardest conflict was in 2022, and it led to a lot of destruction of property."

Chairman, Peace Committee, Rongai constituency

To understand the underlying causes of NR related conflicts in the River Rongai catchment, the study began by examining the main factors that drive tension and disputes over water. They reflect the pressures experienced by different water users. Table 4.4 presents the key factors reported by respondents who addressed the question of drivers of the conflict.

Table 4.4: Responses on Factors Contributing to Natural Resource Conflicts

Conflict driver	**Female**		**Male**	
	N	**%**	**N**	**%**
Unregulated water abstraction	13	16.3	9	15.5
Seasonal water shortage	12	15	8	13.8
Land use changes (e.g. farming near rivers, sand harvesting)	6	7.5	9	15.5
Pollution (from chemicals, bathing, dumping waste)	9	11.3	4	7

As shown in Table 4.4, the drivers of natural resource conflicts were identified differently by women and men participants. Some of the most mentioned reasons included uncontrolled water and water abstraction (13 women and nine men), and seasonal water scarcity (12 women and eight men). It is important to note that men were more commonly mentioning land use changes, whereas women were more mentioning issues of pollution. Such a gendered difference is consistent with the role and responsibility differentiation of men and women in the natural resource economy of the River Rongai catchment.

Unregulated water abstraction was attributed to the growth of commercial agriculture especially floriculture and tomato farming along the river. Some of the respondents indicated that it is by the early 1990´s that unregulated water abstraction had begun to interfere with the water flow. This finding affirms Boakye (2008) observation that increased demand for irrigation in agriculture significantly alters water variability, often leading to reduced downstream flow and therefore competition among users.

Water abstraction was followed by seasonal water shortage between January-March and September/December months. These months are marked by reduced rainfall and high demand for water among all users, both domestic and commercial. This leads to stiff

competition over the little available water and hence conflicts arise. One woman from the mixed gender FGD reported that;

> *"The river would dry up in sections, and people started fighting over who had rights to the available water flowing."*

One male from the youth focus group reported that.

> *"When the river dries up, everyone becomes angry. Farmers, herders, and even those fetching for home use - everyone thinks they should come first."*

Changes in water availability could also be linked with climate change, as one male household respondent stated.

> *"In the past, the community had a normal weather calendar. Now it is variable. A normal calendar implies well defined seasons. Today rain patterns have really changed. We cannot really describe a pattern as weather is not predictable anymore."*

Pollution of the river was another concern, particularly among downstream users who rely on the water for domestic use. This finding affirms Francis (2000) who asserts that water pollution is a driver of NRC. Respondents associated pollution with chemical runoff from tomato farms, household waste disposal and livestock watering.

> *"During the rainy season, water pollutants flow downstream, but large volumes of water help dilute them, so you don't easily notice that the water is contaminated. But during the dry season, when river volume is low, pollution is more concentrated. The water turns brown or green, and it smells. Stones at the riverbed also change colour to white, evidence of chemicals in the water we believe. You can feel the difference when using the water."*
>
> Woman respondent from KII.

This quote comes out to indicate that pollution is more evident and dangerous in dry seasons where water is little enough to carry the waste away. Nevertheless, a significant number of respondents reiterated that they do not have the option of source other than water but they have to utilize it whether it is polluted or not.

A rapid population growth has also been witnessed in the region that has resulted into land use alteration in association with a rise in firewood, charcoal, timber and farmland demands. Deforestation has added to diminished base flow of water during dry season, and augmented flash flooding during wet season (Plate 4.1).

Climate variability is an issue that was raised by a KII though not by a significant number of participants. One of the key informants of WRUA indicated that the flow and supply

of water in the River Rongai have been influenced by irregular rainfall patterns and extended dry seasons over time. When the majority of the community members were inclined towards other more immediate and visible causes like water abstraction, pollution and land-use alterations, the WRUA chairman pointed out that the alteration in the precipitation and temperature patterns were also affecting both the surface and groundwater levels.

This is in line with broader studies which indicate that climate variability adds water stress and disrupts local livelihoods particularly in climate change impacted areas like in Sub-Saharan Africa (World Bank, 2021). Further literature from a joint study conducted by the United Nations Environment Programme (UNEP), UN Women, the United Nations Department of Political and Peacebuilding Affairs (DPPA), and the United Nations Development Programme (UNDP) established a framework illustrating the deep interconnections between gender, climate change, and security. Similarly, research by the United States Agency for International Development (USAID) highlighted a notable correlation between regions that are highly vulnerable to climate change and those already experiencing state fragility and gender inequality. Therefore, we can conclude that climate change at the very least indirectly contributes to conflict risks. often functioning as a threat multiplier, intensifying existing insecurities.

Plate 4.1: Rainy Season River Flooded in River Rongai

4.5 Themes and Subthemes Identified

In this section, the themes and subthemes of the study, identified through thematic analysis of the data, as depicted in Table 4.5.

Table 4.5: Themes and Sub-Themes Identified in River Rongai Area

Theme 1	**Theme2**	**Theme 3**	**Theme 4**	**Theme 5**
Cultural influence	Government & leaders influence	Socio-economic influence	Community participation & engagement	Availability of alternative water sources
Sub-theme 1.1 Gender roles in NRCM			**Sub-theme 4.1** Conflict management styles	

4.5.1 Cultural Influences on Gendered Aspects of Natural Resource Conflict Management

The population of Rongai area is made up primarily of people from the Kalenjin tribal group but includes immigrants from other tribes and groups who are both small scale and commercial farmers (Male only FGD). Superstitions, cultural beliefs and taboos are common in all societies around the globe and they influence how human beings behave and also determine their interaction with the environment (Negi, 2010). Taboos serve as an example of informal institution as unwritten rules that regulate the acceptable behaviour in the society, including usage and control of natural resources (Colding et al., 1997). As in many African contexts, such norms in the River Rongai area often restrict women from participating in specific activities, thereby constraining their involvement in developmental processes, including NRCM.

Cultural influence and traditional practices vis-à-vis gender play a significant role in shaping how water related conflicts are perceived and managed within the community (Rahim, 2020). According to participants in the women's FGD, NRCM is not only a matter of formal community rules. It also includes customary norms, beliefs, taboos and the roles assigned to different genders. This was also supported by two other all gender FGDs:

> *"In our community before any conflict about water is discussed, it is taken to the chief or elders who are mostly men. They are the first to be consulted because that is our way. Women can talk but their views are usually passed through their husbands or older male relatives."*
>
> Woman in mixed – gender FGD

Cultural values grounded in kinship, helping each other, and communal cohesion continue to play a crucial role in shaping conflict management dynamics in the River Rongai area, this is noted elsewhere in broader Kenyan society, where cultural, kinship, and social ties have long bound communities together remain intact in many local settings. These shared cultural values, emphasise respect for one another, the environment, and peaceful coexistence, were repeatedly cited by only women as foundational in de-escalating water-related conflicts in the river Rongai area.

During the study women participants said that in moments of tension, community members often chose not to escalate disputes beyond a certain point, because of the long-standing relationships. Already, there were established intermarriages, sharing of churches and schools and shared long-term histories. Because of all this the desire to live in harmony is powerful. As supported by the following excerpt during a semi structured interview:

> *Even when there's anger about water, we can't go as far as fighting. You know your neighbour is someone whose child plays with yours or helps you during weddings or funerals. So even if you're angry, you hold yourself back. You don't want to make your neighbour a lifelong enemy.*

The study indicated that men and women engage differently in water resource management based on socially constructed roles and responsibilities. Interview and focus group discussion qualitative data revealed that men and women are vital contributors to water access, water use, and local government. The nature and degree of their involvement, however, was different.

Whereas women were mainly considered to be doing domestic water collection, household consumption and informal livelihoods like hawking at the roadside, men were more found to be involved in the irrigation, sand harvesting and other formal decision making structures like WRUAs and PCs. These gendered patterns reflect entrenched socio-cultural norms that influence how men and women access and control water resources.

As indicated before, some communities do not accept women and youth participation in CM, and it was clear from some participants that women and youth inclusion was not met with optimism. The following quote from women only FGD captured a general feeling among women on how they experienced their exclusion from NRCM processes:

"We see the problems before anyone else but when there's a conflict, they call the men to solve it. They forget we also have voices. It is the men who talk in barazas but it's the women who suffer when water runs out. Sometimes the elders don't want us to speak, even if they know we know more about the issue."

As further observed by the researcher, the major work of cooking and preparing for daily meals is carried out by women including collection of firewood and fetching of water. Collection of fodder for cattle alone for example, take nearly four to five hours of women's day. Cooking of meals and taking care of children are exclusive responsibilities of women. These observations agree with Schirch (2022) that the responsibilities women shoulder in managing natural resources for household use often place substantial demands on their time.

These time burdens can hinder their participation in activities that contribute to personal and economic advancement, such as pursuing education, engaging in decision-making processes, or developing entrepreneurial ventures (Bogale & Korf, 2009). An example of this is that women are said to consume three to four hours a day gathering fuel to be used at home. Moreover, in most developing nations, women are considered to walk a daily distance of six kilometres on average to obtain water (Dinko et al., 2024). This challenge is particularly pronounced among female-headed households in Rongai, where women have identified water and firewood collection as some of their most time-consuming tasks. As a woman, in women only FGD agreed.

"Even though women are the ones who fetch water daily and experience water shortage when water levels are low, they are not included in the big meetings where decisions are made. It's our culture."

With these gendered accepted roles, communities affected by natural resource conflicts, cultural expectations around gender roles often begin to shift, particularly during times of crisis (Dinko *et al*., 2024). Similarly, while traditional norms in the River Rongai catchment have largely confined women to domestic and caregiving roles, the realities of water scarcity and resource conflict have compelled them to take on more public responsibilities, like showing interest to be part of peace building initiatives (female only FGD).

4.5.2 Government and Institutionalised Community Leaders' Roles in Natural Resource Conflict Management

Participants were asked whether there was an organised and institutionalised group of elders in Rongai area like the council of elders common in other parts of Kenya. During and in-depth interview with two village elders, they confirmed that the community had some form

of elder-based organisation, consisting of purely men and formed for different purposes. The Kalenjin community, being the dominant group in the area, was found to have a structured council of elders. A *Poiyot ap Kokwet* was identified as the elder who acted as the spokesperson for the *Kokwet* - a unit comprising 20 to 30 scattered homesteads. It was also reported that some members of the community belonged to the Kalenjin Council of Elders, and two were also affiliated with the National Council of Elders, which draws membership from across the country. It was important to note that women remain largely excluded from traditional eldership organisation in the River Rongai area.

Participants in all the FGDs noted that while respect for community leaders and elders has declined over time, it remains relatively strong and influential within the River Rongai community. Most interviewees reported that among the Kalenjin, elders are highly respected and serve as the primary authority for resolving disputes. The *Kokwet* elders are particularly influential they are responsible for allocating land for cultivation and are the first point of reference for resolving disagreements or issues that cannot be settled directly between the parties involved.

One of the elders who was interviewed gave the following observation on the Kalenjin community:

"Since the Kalenjin young people doctrine hold their elders in higher esteem I occasionally

feel that they do something wrong or initiate conflict, which may be something the elders have allowed."

This is an indication that the elders in Rongai community still play a major role and have authority. The elders must be involved in any conflict resolution process to be effective and successful particularly in matters related to natural resources such as access to water and land. The researchers concluded that the community leadership remains a prestigious and significant institution of dealing with tensions and leading the community response in this region. This implied that the presence of elders and community is beneficial to both women and men equally although not in voice and power. In other African regions, it is the same as in the case of Rongai. Indicatively, in the Yoruba in Nigeria, the agba (male elders) was at the centre of socio-political issues, and was a reliable institution in handling conflicts (Kazeem, 2009).

In Kenya, CM is significant in the role of the government and government institutions since the national and county government initiatives have been applied to enhance water governance and conflict management in Kenya. In 1999 with the Environmental Management

and Co-ordination Act (revised 2015) and the Water Act of 2002 (also revised 2015), the Water Resources Management Authority was formed through the National Environmental Management Authority.

These legal systems brought significant transformations on the regulation and management of surface and groundwater in the country and gave WRMA the authority to preserve, administer, and control surface and groundwater. With the 2010 Kenya Constitution, WRMA's role was reviewed and later transformed into the Water Resources Authority (WRA) under the 2016 Water Act, decentralising some of its responsibilities to county-level structures.

All FGD participants recognised that the government through state actors like chiefs, ward administrators and police are very instrumental in managing the NRC in the area. One key informant interviewee who is a community health worker stated that,

"Government reaches to all parts of the community."

The Chiefs, for example, in collaboration with the Administration Police, played a key role in restoring safety in the area. Their efforts allowed households and businesses to resume their socio-economic activities without fear. Additionally, the chiefs actively monitored the security situation and ensured timely reporting of any concerns.

In other more technology developed regions, water levels are monitored using advanced telemetry devices to regulate abstraction based on coded zones (Sene, 2024). In the lower catchment area, the Peace Committee and WRUA chairman rely on the visual monitoring of a specific stone situated along the riverbed. This stone is a culturally approved and useful tool that measures the health of rivers. As soon as the stone appears in the open, it is an indicator that the water line has fallen to a considerable distance, which is a timely sign that the lack of water can soon cause frictions or confrontations between its users.

Local leaders respond to these signs by reporting the case to the relevant authorities such as county water officers or administration. This will allow you to interact with the communities early enough and initiate preventative measures to contain escalating frustrations, which would otherwise lead to protests, demonstrations, or inter-group conflict. This surveillance is considered the indigenous knowledge and adaptive strategies of the community.

4.5.3 Socio-Economic Influence on NRCM in River Rongai

The socio-economic factors play a crucial role in the conflict resolution process and healing of the emotional issues of the feuding parties (Beyene, 2014). Relationships between socio-economic variables and NRCM have literature, especially how economic disparities, actual and imagined, determine the grievances of the women and men of resource-based confrontations (de Almagro, 2023). In the River Rongai area, the study tended to reveal that

economic inequality among water users influenced both the escalation of conflict and conflict management.

When social and economic conditions evolve, it is expected that the priorities and needs of those who rely on natural resources will also shift. As economic development progresses, it frequently places greater strain on natural resources, which can either spark new conflicts or intensify those that already exist (Berkes, 2010). The following are examples that emerged in the study.

The data from all the FGDs and 27 of the 53 questionnaires revealed an inequality in water access between wealthier and poorer farmers. The informants had observed that this is particularly so with respect to those with large scale horticultural farms with their own boreholes and storage tanks and with poor smallholders or tenant farmers who exclusively depend on direct river abstraction. This conforms to what Funder et al. (2012) refers to as being horizontal inequalities. These group disparities were observed to prevail all over the catchment. Informants noted also that they fuel perceptions of marginalisation and can contribute as a trigger for conflict. During the mixed-gender FGD, participants agreed with a male leader that,

> *"Those with big farms have their own boreholes and tanks, so they don't feel the pinch like us. When the river dries up, it is our farms that suffer. We are left fighting for the little that's left while they continue farming as usual….*
>
> *I am sure you ask yourself whether we are in the same community. The rich sort they are too easily, and we stand in the queue at the river with jerricans hoping that it hasn't. dried…"*

In one of the KIIs with the upper catchment area chief of River Rongai, she observed that, migration has greatly influenced how local people are organized and how they manage the natural resources especially water. She observed that with the continued movement of people to urban centres and other areas in pursuit of economic gains, there has been a shortage of labour to support the maintenance of the sustainable water management practices. This, according to her, might be helping to deteriorate the quality and reliability of the water resources in the region over time since there is less population left behind to engage in the conservation efforts.

The chief, also, pointed at the fact that the influx of outside people into the upper catchment has added pressure on the water resources and broken the local standards of access and utilization. New residents are mostly not aware or knowledgeable of the traditional systems and informal agreements that used to be used to water sharing, which can occasionally result in the conflict and misinterpretations with old residents.

She also added that the migrants bring with them various economic and domestic activities like sand harvesting, washing clothes and bathing directly in the river not only pollute the water source but lead to the degradation and overstraining of the already scarce water resources. The practices have made matters even harder when it comes to governing resources and this has led to the grievance in the community.

The large flower farms, the other commercial farms and majority of the household leadership is male dominated. In the community social conventions, men are expected to be the primary providers as stipulated in the social structure. This means that older men make critical decisions concerning water access, allocation, and sharing, and women are left with little power even given that they are one of the most impacted aspects of water scarcity. This boosts inequality in power relations because women in low-income-based families have to manage both competition over resources and their inability to have a voice in both formal and informal conflict resolution forums.

In this way, the socio-economic inequality not only fuels conflict but also perpetuates gendered exclusion from analysing and managing conflict. There is therefore a need for approaches that account for both class and gender in NRCM in the river Rongai area.

4.5.4 Community Participation & Engagement; and Alternative Water Sources

Successful transformation of conflict and peacebuilding require appropriate gender specific measures across communities (Wakenge *et al*., 2021). Given the high probability of post-conflict societies reverting to violence, it is essential to adopt deliberate and preventative measures to avoid renewed conflict. A common response in such fragile contexts has been the deployment of police forces to stabilise the region and supposedly provide a foundation for peacebuilding. However, this strategy can be interpreted as a form of militarising the peace process, which may undermine the legitimacy of local participation and reduce community ownership in the process.

Prioritising development interventions and strategies, therefore, has been identified as a more constructive and sustainable approach (Hesami *et al*., 2021). Hesami *et al* argued that development-focused strategies can address underlying structural inequalities, strengthen civil society, and empower local governments to implement peaceful conflict resolution mechanisms. Such interventions and strategies if gender sensitive, are more likely to foster durable peace and resilience during the post-conflict recovery phase (Kajsjö, 2024).

Natural Resource Management refers to the constellation of laws, cultural practices, and institutional arrangements that guide the access, distribution and control of water (Yeboah-

Assiamah *et al*., 2017). Interviews from mixed gender FGD, revealed that, conflicts over water in River Rongai area are not solely a result of scarcity but are fundamentally linked to the governance and management of water resources and who has the decision-making power, how access is negotiated, and whose voices are included or excluded in these processes.

To help manage the conflict over water access in River Rongai area, 36 out of 53 participants interviews mentioned that availability of alternative water sources and adaptive technologies by stakeholders would be a strategic solution to the water stress. Most interview participants said that alternative water sources help manage competing interests among stakeholders while reducing the likelihood of confrontational responses during periods of water scarcity.

A growing shift toward the use of non-conventional water resources, especially in regions facing water scarcity (Ricart *et al*., 2021). The use of treated wastewater, which in most cases is produced during wastewater treatment plants or the food processing industry, is being actively encouraged, especially in agriculture as a viable solution to a shortage of fresh water (Fito, 2021). Fito points out that such practice can facilitate competition among the users and also lower the pressure on the existing water resources.

Examples of investments made by flower farms in the study area, such as River Rongai, include investments in sustainable water management in response to the need to curb reliance on the direct abstraction of rivers. In a phone interview with a 24 minutes with an administrator of one of the upper catchment flower farms, it was revealed that the company has incorporated new irrigation and monitoring technologies such as closed-loop hydroponic systems, drip irrigation, and soil moisture sensors to cut back on their water usage. Such innovations in the mind of the administrator signify a change of extractive practice to a cooperative use of the resources given that all the stakeholders are vulnerable to the variability of the rivers. The administrator states that:

"... We cultivate Hypericum, Gypsophila and Statice with the help of pumice.
trays and coco-peat. It is a closed-circuit system...we recycle.
everything. There's hardly any wastage."

The other flower farm within the lower catchment has embraced water sharing which is an approachable community approach. The farm possesses its own borehole and moves clean water through the piping to the neighbouring houses (Plate 4.2). In an in depth interview of seven household respondents residing close to the flower farm this intervention has been especially transformative to women who are the ones charged with the main role of water collection in most households. The respondent women affirmed that access to piped water in

the flower farm has greatly helped them save the long distances they used to walk especially during dry seasons in search of water. Furthermore, the women were relieved and thankful that they have piped water since they claimed it was safer to use in drinking, cooking and washing than the usually polluted river water. One of the female respondents in the household explained,

"We do not have to worry about the diarrhoea or bad smell as we used to do now that we are getting water supplied by Dele Flora flower farm. We only go to the river when fishing shall our crops require water".

Plate 4.2: Extended Piped Water by Flower Farm

At household level, 26 families out of 51 households interviewed have invested in rainwater harvesting tanks (Plate 4.3), while a few households reported to have benefitted from piped gravity-fed water from the Chemasusu area in Eldama Ravine, a neighbouring region. Supported by county government initiatives, these water sources reduce reliance on the river, especially during peak dry months, when conflicts are historically more frequent. A key informant interview with a community worker revealed that the alternative piped water system is unreliable, often going for extended periods without any water flowing through the pipes. Leaving the community members to rely more on rain water harvested, stored and used sustainably.

In line with studies which have demonstrated that rainwater harvesting (RH) is a viable solution for water provision across urban, peri-urban, industrial, and rural settings (Bohlken *et al*., 2010). RH is widely implemented and regarded as cost-effective, environmentally sustainable, and associated with minimal health risks (Chanya *et al*., 2014). According to Chanya *et al* because of this popularity, there is an increased adoption in both developing and

developed countries. Successful implementation of RH systems also depends on coordinated advancements in structures (Nachshon *et al*., 2016), supportive policy frameworks, and thorough evaluations of economic and public health implications for it to be successfully integrated into water management plans (Fernandes *et al*., 2015).

The participants from a women-only focus group discussion revealed that as the primary users and managers of household water, women have organised themselves into informal savings groups, locally referred to as *chamas*. They collectively purchase water tanks for RH or hire mobile water tanks during times of scarcity. These grassroots movements represent the change of traditionally inactive positions commonly attributed to women within patriarchal structures to the more active involvement in cooperation and compromising in their efforts to provide their households and farms with water. This observation is consistent with the views of feminists which stressed the significance of financial empowering women as an urgent measure of increasing their involvement in conflict management processes. The action of these women also concurs with Agarwal (2001) regarding environmental feminist whereby the agency of women in maintaining the common pool resources in the state of ecological stress is exposed. Vendor of vegetables on the roadside with one woman observed:

"We even go out to purchase water. You don't wait for your husband...he's in the farm. You just do what's needed."

Plate 4.3: Household Water Tank & Mobile Water Tank

The results of the FGDs showed that the churches were extremely crucial in developing ethics and peaceful coexistence among the inhabitants of the community. Respondents commented that with the help of religious lessons, people were asked to eliminate quarrels, conflicts, idle speech, and gossip and, instead, focus their attention on more productive and less conflictual actions. The researcher noted that African Inland Church (AIC) and Roman Catholic were quite prevalent in the region. Moreover, all the female participants said they

were regular at church but only 16 out of the 53 men participants. The researcher also observed that the presiding church prayers by the priests were only done by male priests.

One pastor interviewed highlighted how churches brought a sense of spiritual presence into everyday life, portraying God not as distant but as a lived reality that shaped how people related to one another. He explained that churches actively taught values such as neighbourliness, patience, and peace.

> *"A peaceful society is a developing society; peace and development go hand in hand. The church preaches peace,"* he said.

These teachings by the churches in Rongai seem to have contributed significantly to reducing tensions related to water access.

4.6 Natural Resource Conflict Management Styles Across Genders in the River Rongai Area

The respondents were asked whether there was a difference in CM styles between men and women. Respondents from the five FGDs unanimously observed that there are indeed gendered differences in NRCM and that they were normal in their community. All the FGD cited that as an immediate and collective expression of frustration over water scarcity, men, and youth often take to the roads in protest blocking access with stones and debris, destroying crops in nearby farms and vandalising irrigation equipment along the river. Many years of research have shown how men and women often deal with conflict in different ways (Rahim 2020). Most of these studies have looked at how likely each gender is to use one of the five common conflict management styles mentioned above in theoretical framework.

Table 4.6: Conflict Management Styles Across Genders

Conflict Management Style (TKI)	Women %	Men %	Examples
Collaborating	37.8	23.3	Holding peace meetings, calling on all stakeholders to be accountable with their water usage etc.
Avoiding	27.0	13.3	Silent withdrawal from conflict spaces; women opting out of public forums due to power gaps; small-scale farmers migrating to Lake Baringo to avoid conflict
Compromising	16.2	20.0	Rotational watering schedules; flower farms agreeing to share water; informal water-use pacts between neighbours
Accommodating	13.5	6.7	Prioritising domestic use; households investing in water tanks or chemasusu to reduce river reliance
Competing	5.4	36.7	Disrupting water pipes; uprooting tomato crops; mobilising night demos and marching to government offices

An interview with a key informant Makongeni area chief, observed that when tensions over water access escalate, it often becomes a collective community responsibility first to de-escalate the situation, second to find solutions for securing alternative water sources and third to address the factors contributing to reduced water flow in the river. The question to the participants was, are all the voices equally involved in this group intervention?

In women only FGD, they unanimously stated that women often have taken symbolic demonstrations as a way of expressing their concern over water scarcity. Groups of women mobilise and go on peaceful protests by marching through the local marketplace with empty water cans and buckets (often after men have carried out their protests). The empty water cans as a symbol of the lack of water in their households. Their screams and shouts during the

demonstrations were a powerful expression of the daily hardships faced by women as primary water collectors. Women organise this after men have forcefully protested.

Interviews with 16 women out of the 43 mixed gender household interviews, further confirmed that indeed the women show their frustration with water scarcity in symbolic ways. The findings also revealed that women were not involved in planning demonstrations or protests. Many women said they usually woke up to find the men had already taken to the roads blocking them and carrying pangas. These actions by women in Rongai are in line with environmental feminist's perspectives that links women's roles as primary caregivers and water collectors to their unique environmental knowledge and peaceful, symbolic forms of resistance. Their actions illustrate how women embody both the burden of environmental degradation and the drive for communal resilience.

When asked why women were excluded from the planning, men in a male-only focus group discussion said that women tend to talk too much and spread information. They felt that when the females were aware of the plan, they could report to the authorities thus, the farmers would not be easily held responsible when it comes to water diversion. The men explained that they intended to wind up these farmers red-handed with irrigation pipes and diverted river water and to then demolish their crops and irrigation gear to take revenge against them due to causing water shortages to other consumers. It is this marginalization of women that mirrors the organization of social norms in River Rongai community, where women are mistrusted and disregarded though they are at the centre of overseeing natural resources.

Men in the study area often take a more direct forceful approach by organising protests, often mobilising each other overnight in response to rising tensions. As one respondent in the men only FGD described,

"You just wake up and find the men already in the roads demonstrating peacefully, so you have no option but to join them and help them march to the government offices. Sometimes we go to the farms where we think water has been abstracted, following the river up to the source to see where the problem is."

According to Archer (2022), the 'masculine' behaviour norms typically displayed by males tend to escalate tension and increase aggression in situations of conflict. The participants in the male only FGD further felt that, acts by men during protests often lead to more retaliation by the affected groups who are mostly farmers. As a result, what may begin as a cry for fair access to water can quickly turn into a cycle of conflict, where each group feels the need to fight back against those they view as enemies. Over time, the original goal of demanding water access is transformed to desire for revenge. An excerpt from only male FGD stated that.

"We start by asking for water, but when they ignore us or fight back, it turns into a war. Now it's not just about water… it's about showing them we won't be stepped on."

When asked about what difference they thought it would bring if they women could be involved in decision making before protests, a woman in a female only FGD said that there could make a difference because women's approach is peaceful and rarely brings out further violence. This is noted also by Bajoria *et al.* (2021) who stated that when women are included in conflict management, it can help reduce tensions and encourage people to work together because, they suggest, women often have better skills for resolving conflict than men.

To promote more collaborative attitudes among the water users, an interview with the WRUA chairman stated that first; the association has adopted more cooperative style to ease tensions around water use. One practical approach has been the informal scheduling of water access, where users agree on rotational times for drawing water from the river. These locally arranged agreements, often made during public barazas, allow different groups especially those upstream to share limited water.

Secondly, as a way to promote more collaboration, and gender inclusivity in NRCM, participants from mixed gender FGD, agreed that there are environmental efforts, such as tree planting along the riverbanks and the removal of eucalyptus trees that are thought to use a lot water. These activities, led by WRUAs and supported by both men and women, not only aim to restore the degraded river ecosystem but also strengthen relationships among community members. From the study the participants contended that, working together in these initiatives creates space for dialogue, builds trust, and reminds people that protecting the river is a shared responsibility.

From household interviews, it was not clear how many people in the study area chose to relocate to areas such as Lake Baringo where water is more abundant for irrigation. According to the Makongeni chief, at least 11 of his villagers' farmers have done so. This figure may change since he lacks clear records to track migration. In his opinion, this movement enabled the reduction of tension in the country by taking off pressure on the scarce water supply. The (TKI) attributed this strategy to the Avoiding style where the parties opt to avoid or back out of a conflict instead of directly facing it. The avoidance, as also described by Rahim (2020), can be a short-term measure that can help avoid escalation but does not eliminate the problems. In this example, although the relocation alleviated the short-term pressure on the river, it expressed the lack of the long-term conflict-solving plans including everyone.

These measures as shown in Rongai societies are in line with Putallaz et al. (1995) who posited that in a situation where official interventions have been seen to be ineffective,

community-based interventions have shown that conflict management can also be achieved through cooperation, caring, and a long-term desire to survive together. The following table presents the conflict management styles that are applied in the river Rongai Community.

4.7 Gender Specific Challenges in Natural Resource Conflict Management

The issue of gender obstacles to involvement in conflict management is not merely a question of presence or absence of the parties involved in the conflict and peace building. They manifest in the River Rongai region as endemic structural inequalities like access to education, information, institutional space and decision making powers that impact on NRCM.

Although women are greatly influenced by the conflict over the water, they are not involved in the management of the conflict (James et al., 2007). Some of the informants observed that women have been demotivated or even weary of recurrent exclusion and quit some actions of participating in the formal decision-making processes. The most common reasons given were that it was not within the culture, there was a lack of access to information and that they felt they did not have a say in it. As one of the respondents in this household said,

"There are times when you talk only once or twice and, no one listens to you, you simply quit attending the meetings."

This highlights how unequal power dynamics not only exclude women but can also erode their motivation and willingness to participate in future efforts.

Gender analyses in the Solomon Islands and Brazil show that although women feel resources need to be better managed, they may lack access to the information and resources needed to contribute meaningfully to decisions (Goldstein *et al*., 2012). In many parts of the world, and in this River Rongai study, women and girls have reduced access to education (particularly secondary and tertiary, Table 4.3), which can limit their invitation and perceived legitimacy to be part of conservation actions, and their access to positions within natural resource management organisations. For example, it was evident from the study that the composition of the Peace Committee in Rongai constituency is made up of men only.

Studies from Bolivia, Mexico, Uganda and Kenya, for instance found that the likelihood that a woman would be entrusted with the responsibility of representing the household on a Peace Committee increased with her level of education (Goldstein *et al*., 2012). This demonstrates that lack of access to education can be a barrier for women, preventing them from contributing to natural resource management.

One person in the youth only FGD further revealed that parents' lack of appreciation of the importance of education (because they themselves are not educated) means they are not motivated to guide their children's education, which has contributed to rising dropout rates.

Furthermore, lower educational qualifications, fewer skills due to lack of formal education and poor command of English are cited as barriers for the youth and make them less competitive in the job market or even to participate in conflict resolution meetings. These dropout students are exposed to alcohol addiction and become involved in activities that could further create conflict in the community.

Many rural areas of developing countries, women are disproportionately burdened with unpaid care and domestic responsibilities (Soliku, 2018). Similarly, in the River Rongai community, a significant gender-specific barrier that emerged from the study is this overwhelming workload, which includes tasks such as fetching water, childcare, cooking, cleaning, and small-scale farming. These commitments are what has been widely termed time poverty, which is a major constraint to women in terms of meeting WRUA, taking part in the public barazas or simply having a say in the process of peacebuilding and natural resource conflict management. This goes to show how gendered segregations of labour have a direct impact on women to be able to participate in the management of natural resources conflict, although they are one of the worst hit by water scarcity and conflict.

A lady interviewed in a home, recorded this dilemma as she said that,

"Before I get done with it at home, the meeting is already ended. And unless I cook, the children are not going to eat."

In the study area, some women described the subtle social dynamics that constrain men from openly supporting gender roles. According to a female only FGD, men are often ridiculed or seen as less masculine by their peers if they assist their wives with domestic chores or farm work, particularly those men who do not hold formal leadership positions such as in village barazas or WRUA. This social pressure discourages male involvement in tasks traditionally perceived as women's responsibilities, even when men may be willing to help.

In addition, the women only focused group discussion shared that within the community, it is still somewhat normalised for a man to physically discipline his wife if she is perceived as failing in her duties at home or on the farm. However, in cases where a woman is seen as highly competent in managing both household and field responsibilities yet still experiences violence from her spouse, she may choose to return to her parents' home or, in rare instances, assertively resist the abuse. When such types of resistance do occur, they are treated as abnormal by the community since this indicates the gender-based power relationship, as well as social norms, which still prevail in River Rongai community.

Eleven of the 14 interviewees disclosed that although the government has tried various times to deal with the root causes of natural resource conflict in the River Rongai catchment,

its interventions have mostly been reactive, but not transformative. Government agencies usually react to the rising tension by sending security agents to calm the situation down and avoid violence eruption or the loss of lives. Nevertheless, all these are temporary and in most aspects fail to deal with the structural causes of the conflict including an unequal distribution of water, deforestation, and bad land-use strategies. Making issues of water resources more politicised also makes it difficult to resolve the conflict. A FGD member of youth said that when it comes to elections sometimes politicians take advantage of NR conflicts by campaigning on delivering better water governance as an election promise,

They arrive and promise us that they will solve the issue of water provided that we elect them, but even after being elected, they do not change anything. The young people felt this tacit application of resource related grievances in political manoeuvres without having any commitment to address the situation in the long-term is killing trust and strengthening the loop of frustrations and conflict.

The members of the community have tried to express their anger regarding the water scarcity by staging peaceful protests. For instance, an interview with the chief from Makongeni location revealed instances where groups of women carrying empty water cans and buckets marched peacefully in the marketplace to draw attention from the government authorities about the lack of access to clean and reliable water from the river. These symbolic acts show women's everyday struggles and are meant to provoke dialogue or action. However, such protests are perceived as threat and police often respond with disproportionate force, including the use of teargas and firing shots into the air to disperse the demonstrators. This is indeed a challenge because the women are unarmed but face armed police force interrupting their peaceful protests.

As a result of the police response, men also, have begun arming themselves during such demonstrations, carrying pangas and other crude weapons, not to instigate violence but, they say, to protect themselves in anticipation of police aggression. During a FGD with men only, the participants stated that,

"Our men have to come out and act as protectors, they have to risk their lives holding pangas and lighting fires by the roadside. It can easily lead to them hurting themselves or even when police fire at them it can cause death. It is indeed a challenge."

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

This study examined gendered aspects of natural resource conflict management (NRCM) within the River Rongai area of Nakuru County, Kenya. The results showed that natural resource conflicts are mostly concerned with the availability of water, as water scarcity is a major source of disagreements. Socio-economic inequalities and lack of balance between upstream and downstream users of water tend to compound such conflicts. The study employed an explanatory sequential mixed methods design drawing on participatory approaches, focus groups, questionnaire and field survey among people aged 18+. The research explored how men and women experience, respond to and manage these conflicts. It was established that gender roles, cultural norms and structural inequalities strongly influence conflict behaviours and participation in conflict management processes.

Women tended to adopt collaborative, accommodative and conflict-avoidant approaches that emphasised dialogue, social harmony, and cooperation. Women tended to step back from conflict spaces because that was socially expected and culturally normal in women's own views, as well as the views of men. Men, on the other hand, tended toward more assertive and confrontational styles that aligned with societal expectations of men having a sense of duty to protect communal resources or family livelihoods. However, there were less than four percentage points difference between women and men's ability to compromise, suggesting that both have an equal capacity for compromise in managing conflict.

There was strong evidence that communities have developed informal yet effective mechanisms for addressing natural resource conflicts. These include dialogue forums, rotational water-sharing agreements, and the establishment of alternative water sources during periods of scarcity. Two key forums for addressing water conflicts, the Water Resources Users Association and the Peace Committee had very few female members and no female leaders. The study revealed that women had lower levels of education compared to men yet a college education and some formal work experience outside the community is a requirement for membership of these forums. Therefore, in addition to social norms and expectations, lower education attainment could also help explain low female participation in village institutions.

5.2 Conclusions

This study draws four main conclusions. Firs*t*, natural resource conflicts in the River Rongai catchment primarily relate to water availability. Water-based conflicts in the area have occurred between 1992 and 2024, primarily driven by fluctuations in water availability. Periods

of reduced river flow, particularly between 2000 and 2023, were marked by heightened tension and conflict. Periods with adequate rainfall in 2010, 2024 and 2025 corresponded with increased water flow and peaceful community co-existence. Water scarcity has a profound effect on women and girls who are mainly responsible for domestic water collection. When river levels fall, they must walk longer distances, facing increased emotional and physical stress to search for water.

Second, the TKI model of conflict management styles suggested some gendered differences in respect of water-scarcity conflicts. Women tend to be more collaborative, accommodating and conflict-avoidant than men, who tend to be more competitive and forceful than women, especially in cases of water abstraction. Men were more likely to take direct action, including protests, physically confronting offenders, organizing community resistance, or even damaging pumps and infrastructure. While there seem to be differences between male and female CM styles, there are also similarities. There were less than four percentage points difference between women and men's ability to compromise, suggesting that both have an equal capacity for compromise in managing conflict.

These things said, the TKI model is of limited use in explaining *why* men and women might demonstrate different styles. This research was not able to explain anything inherent in femaleness or maleness that might explain these gendered differences. For some kind of explanation, we must turn toward a discussion of cultural norms, roles and societal expectations that are more embedded in feminist and social theories.

A third conclusion then, is that socialisation into customary gender roles and relations may help to account for different conflict management styles, while creating a sense that these styles are 'natural' rather than socially learned. Many women were willing to support dialogue, joint problem-solving, and consensus-building by participating in bodies such as WRUAs and Peace Committees. Yet women were virtually absent from such platforms. This could be explained by women's greater 'natural' tendency toward conflict avoidance. However, women in this study reported choosing to step back from conflict spaces because that was socially expected and culturally normal, in women's own views, as well as the views of men. Similarly, men's engagement in direct (sometimes physical) action were often marked by a sense of duty to protect communal resources or family livelihoods, aligning with societal expectations of men as defenders.

An additional important factor may help account for low women's participation in decision-making processes generally, as well as in respect of formal institutions dealing with water-related conflicts. A college education and some formal work experience outside the

community is a requirement for membership of groups like the WRUA and Peace Committee. Yet the study revealed that women had lower levels of education compared to men. Therefore, in addition to social norms and expectations, lower education attainment must also be added to explanations for lower female participation in village institutions. This is in line with Rahim *et al*., (2020) and automatically reduces the pool of women who could potentially engage in peace building efforts.

Does any of this matter? Clearly, Rongai communities have managed, by and large, to maintain peace when there is a flare up. Until now, people have managed to remove themselves from a conflict before it turns dangerously violent and re-establish a kind of peace that continues until the next flare up. Superficially then, there seems no reason to think that any further action is needed. Whatever people are doing now is sufficient to restore peace when there is a flare up.

However, this brings us to a fourth conclusion, namely the reasons for challenging the status quo. One set of reasons relates to environmental and social change. Environmental changes principally relate to annual fluctuations in weather patterns due to longer-term changes in climate, and to loss of protective forest and woodland cover in the upper catchment. Social changes mainly relate to demographics and land use. As more people come to the area, demand for water is increasing. As large farms expand or become more common, they too impose increasing demands on water supply. In the absence of water harvesting, recycling or storage structures, these demands can only be met by the river itself.

A second set of reasons for interrogating the status quo relates to gendered aspects of managing water use, unsustainable abstraction of water in times of shortage, and the associated conflicts. Women are the primary users of water within households and communities. Their roles in cooking, cleaning, caregiving, and managing household hygiene tie them to the availability and quality of water. As one woman amusingly said, "*Men can go for days without washing, but we need water every day for ourselves and our children."*

Women interact differently with the environment than men. If their views on the causes, consequences and solutions to water shortages or poor resources management are excluded, their unique knowledge and perspectives may not be considered in future conflict management or peace building endeavours.

For these two reasons then (environmental and social change; and gendered aspects of sustainable water use), this study reaches one key conclusion. Until now, flare ups and conflict associated with water shortages have been successfully managed by skilled, thoughtful, socially and politically astute actions carried out by able and much respected people. However,

given the environmental and social changes already happening, the single most important change that is needed are measures to increase the opportunities for similarly able women to engage in conflict analysis and action, vis-à-vis unsustainable abstraction of water. Indeed, the same could be said for increasing women's engagement in natural resources conflict management in general.

5.3 Recommendations

The study´s recommendations are:

i. To strengthen and support community-based conflict resolution structures, including training, improved financial resourcing or other capacity building approaches to help them function consistently, not only during times of crisis.

ii. To address gendered barriers in conflict resolution processes by creating safe, women-led forums for community dialogue and integrating gender quotas in peace committees and WRUA. Women in Rongai face multiple barriers to active participation from domestic workloads and restrictions to low confidence in public spaces and exclusion from local decision-making. Even where women are nominally included, they often lack real influence.

iii. County government and other relevant actors should invest in engineering or bio-engineering solutions (such as check dams, water harvesting, boreholes, reservoirs etc.). Such feasibility studies as a priority, to explore the range of possibilities and their cost-effectiveness. Clearly this would need to include a cost- benefit analysis and agreement on who would bear the cost or else the consequence of any cost sharing arrangements.

Further policy recommendations therefore are:

i. Revising WRUA and Peace Committee frameworks to make gender inclusion a performance indicator, not just a box-ticking exercise. This includes budgeting for women's capacity building and logistical support (e.g., childcare, transport allowances).

ii. Integrating land-use planning and water governance so that riparian zones are not compromised by unchecked farming, sand harvesting, or deforestation. County governments should require Environmental and Social Impact Assessments (ESIAs) with a mandatory gender analysis for all projects near the river. Findings need to be implemented.

iii. Expanding the scope of the Nakuru County Integrated Development Plan (CIDP) to include climate-resilient water infrastructure, public-private partnerships for boreholes, and community water-sharing frameworks.

5.4 Suggestions for Further Research

The following recommended area of study would help enrich the understanding of the gendered aspects of natural resource conflict management; existing research and intervention models in natural resource conflict management (NRCM) tend to prioritize formal and state-driven approaches. They often overlook the roles of indigenous and informal CM mechanisms. These local systems such as elders' councils, peace gatherings, and customary dispute reconciliations remain active in many rural communities, including River Rongai. However, their gendered dimensions remain underexplored.

Many of these systems are patriarchal, yet both men and women bring different understandings of natural resources conflicts and how to analyse and address them. There is an urgent need for further research into how these indigenous and informal conflict management systems incorporate or exclude gendered experiences, perspectives and leadership, especially during periods of scarcity and competition for resources. This research needs to go beyond simply describing the problems or opportunities. It needs to be action-oriented and make clear the social, environmental and economic case for including women in the analysis and management of natural resources conflicts, and in sustaining peace.

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APPENDICES

Appendix I: Key Informant Interview schedule

Scheduled Questions:

1. How would you describe recent changes in water levels in River Rongai, and how have they affected the surrounding communities?
2. In your view, what are the main causes of water-related conflicts in this region?
3. How has your office/organisation been involved in addressing water conflicts or responding to fluctuations in river levels?
4. What are the economic and social impacts of water scarcity on farming, domestic water use, and other livelihoods in this area?
5. What conflict resolution strategies have been used when tensions over water arise? How effective have they been?
6. Are men and women affected differently by water-related conflicts? If so, how is this considered in conflict resolution and resource management?
7. What roles do local institutions like WRUAs or peace committees play in managing water conflicts and promoting adaptation?
8. What are the most common adaptation strategies employed by community members during low river flows?
9. How inclusive are current water governance or conflict resolution mechanisms, especially in terms of gender and youth participation?
10. What support (technical, financial, institutional) is available to the community to manage water scarcity and related disputes?
11. What recommendations would you give to strengthen local conflict management and adaptation efforts in the River Rongai area?

Appendix II: Structured Participant Observation Guide

1. Water Access Points

- Who is collecting water?
    - Adult women
    - Adult men
    - Children (indicate gender and approximate age)
- Means of collection:
    - Jerrycans
    - Buckets
    - Donkeys/carts
    - Other (specify)
- Distance/time to access:
    - <30 minutes
    - 30 mins–1 hour
    - >1 hour
- Type of water source:
    - River
    - Borehole
    - Tap/Piped
    - Rainwater tank
    - Vendor

2. Natural Resource Use

- Observe farming activities:
    - Women engaging in farming (specify activity)
    - Men engaging in farming (specify activity)
    - Children involved in farming/livelihoods
- Type of crops or livestock kept:
- Irrigation methods used:
    - River-fed furrows
    - Drip/sprinkler systems
    - Manual watering
    - Other (specify)

3. Conflict Indicators

- Evidence of disputes:
    - Verbal disagreements witnessed
    - Disputes over land/water allocation
    - Presence of guards/fencing around water sources or land
- Physical signs of tension/conflict:
    - Burned vegetation
    - Broken infrastructure (pipes/taps/fencing)
    - Barricades, blocked paths or water diversion structures

4. Conflict Management Practices

- Leadership presence:
    - Community elders/WRUA members mediating
    - Chiefs/sub-chiefs present
    - NGO/CBO officials facilitating dialogue
- Evidence of community dialogue:
    - Meetings in progress (record number of men/women)
    - Use of posters, charts, or signboards promoting peaceful water use
- Gender inclusion:
    - Women actively speaking
    - Men dominating conversations
    - Youth involved

5. Daily Routines and Responsibilities

- Gender division of labour:
    - Men involved in herding, irrigation, land clearing
    - Women involved in planting, watering, harvesting
    - Women/children in domestic water collection
- Child involvement:
    - Carrying water
    - Feeding livestock
    - Farming/gardening assistance

6. Environmental Conditions

- Degradation indicators:
    - Visible soil erosion
    - Deforestation/cleared riparian land

    - Water pollution (soap, waste, chemicals)
- Conservation indicators:
    - Tree planting observed
    - Terracing or soil bunds in use
    - Community-led water conservation activities

Appendix III: Focus Group Discussion Guide

1. What strategies would you suggest in enhancing gender inclusion and promote more effective conflict management in the River Rongai area?
2. How do you think gender stereotypes (e.g., that men are strong, and women are nurturing) affect the way conflicts are handled in the community?
3. How do local authorities or community leaders address conflicts related to natural resources (e.g., water, land)?
4. Can you share any examples where gendered perspectives (e.g., women's or men's views) have helped or hindered peacebuilding efforts in this community?
5. How do you ensure that both women and men are equally represented and heard in the conflict management processes?
6. What are some of the most common types of conflicts you have witnessed in this area?
7. Are there specific roles or responsibilities that women and men play in the conflict resolution processes here?

Appendix IV: Questionnaires for Respondents

SECTION 1: Demographic Profile

Instructions:

- Kindly do not write your name.
- Provide your own opinion.
- Please tick where appropriate

1. **Age of respondent:**

   ☐ 18-29

   ☐ 30-49

   ☐ 50-59

   ☐ 60 and above

2. **Gender:**

   ☐ Male

   ☐ Female

3. **What is your highest level of education?**

   ☐ None

   ☐ Primary

   ☐ Secondary

   ☐ Tertiary

4. **Occupation:**

   ☐ Farmer

   ☐ Government employee

   ☐ NGO worker

   ☐ Private Business

   ☐ Not currently employed

   ☐ Other (specify) _____

5. Household composition (current): _____

1. In conflict situations in River Rongai, are men generally perceived as perpetrators or victims? How are they treated by the community when involved in such conflicts?

2. Can you describe the community support systems currently available to individuals affected by conflict? In your experience, are these systems equally accessible to both men and women?
3. In your view, how do experiences of conflict particularly those with gendered aspect, influence men´s relationships with their families and the wider community?
4. Have conflict experiences influenced how men in river Rongai perceive their roles or identities within the community? If so, how has this affected their behaviour and interactions with others?
5. What do you consider to be the most effective strategies for encouraging men to participate actively in conflict resolution and to seek support when necessary?
6. Do you think your gender influences the way you engage in conflict management or resolution in this community? Please explain.
7. How do gender roles and expectations in River Rongai shape how conflicts are managed at home, at work, or within the community?
8. In your experience, how do men and women approach conflict resolution differently, particularly in terms of negotiation or decision-making styles?
9. What specific roles do men and women typically play in conflict management in River Rongai, and how are these roles perceived by others?
10. Are there any specific challenges or opportunities for women when it comes to participating in conflict resolution or peacebuilding processes in this community?

Appendix V: Research Permit Request Letter

EGERTON
Tel: Pilot: 254-51-2217620
254-51-2217877
254-51-2217631
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UNIVERSITY
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Email: bpgs@egerton.ac.ke
www.egerton.ac.ke

OFFICE OF THE DIRECTOR GRADUATE SCHOOL

Ref: GM11/10061/23 **Date:** 19th June, 2025

The Director General
National Commission for Science Technology and Innovation,
P. O. Box 30623-00100
NAIROBI.

Dear Sir,

RE: REQUEST FOR RESEARCH PERMIT – MS. SUSAN AKOYA AKAI REG. NO. GM11/10061/23

This is to introduce and confirm to you that the above named student is in the Department of Women, Gender & Development Studies, Faculty of Arts, Egerton University.

She is a bona-fide registered M.A student in this University. Her research topic is **"Examining the Gendered Aspects of Natural Resource Conflict Management in River Rongai, Nakuru County, Kenya."**

She is at the stage of collecting field data. Please issue her with a research permit to enable her undertake the studies.

Your kind assistance to her will be highly appreciated.

Yours faithfully,

DIRECTOR, BOARD OF POST GRADUATE STUDIES
20 JUN 2025

Prof. Charles M. M'Erimba. Ph.D
DIRECTOR, DIRECTORATE OF POSTGRADUATE STUDIES
CMM/mm

Transforming Lives Through Quality Education

Appendix VI: Ethical Approval

EGERTON UNIVERSITY

TEL: (051) 2217808
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P. O. BOX 536
EGERTON

EGERTON UNIVERSITY INSTITUTIONAL SCIENTIFIC AND ETHICS REVIEW COMMITTEE

EU/RE/DIR/009
Approval No. EUISERC/APP/447/2025 ***23rd May 2025***

Susan Akoya Akai
P.O Box 536-20115, Egerton
Telephone: +254(0)795014592
Email: akoyasuzan@gmail.com

Dear Susan,

RE: ETHICAL APPROVAL: EXAMINING THE GENDERED ASPECTS OF NATURAL RESOURCE CONFLICT MANAGEMENT IN RIVER RONGAI, NAKURU COUNTY, KENYA.

This is to inform you that the ***Egerton University Institutional Scientific and Ethics Review Committee*** has reviewed and approved your above research proposal. Your application approval number is ***EUISERC/APP/447/2025***. The approval period is ***23rd May 2025 – 24th May 2026***
This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by ***Egerton University Institutional Scientific and Ethics Review Committee***.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to ***Egerton University Institutional Scientific and Ethics Review Committee*** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect safety or welfare of study participants and others or affect the integrity of the research must be reported to ***Egerton University Institutional Scientific and Ethics Review Committee*** within 72 hours.
v. Clearance for Material Transfer of biological specimens must be obtained from relevant institutions.

Appendix VII: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **721247**

Date of Issue: **25/June/2025**

RESEARCH LICENSE

This is to Certify that Ms.. Susan Akoya Akai of Egerton University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nakuru on the topic: EXAMINING THE GENDERED ASPECTS OF NATURAL RESOURCE CONFLICT MANAGEMENT IN RIVER RONGAI, NAKURU COUNTY, KENYA. for the period ending : 25/June/2026.

License No: **NACOSTI/P/25/4175356**

721247

Applicant Identification Number

Deputy Director
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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See overleaf for conditions

Appendix VIII: Snapshot of Publication Abstract

INTERNATIONAL JOURNAL OF RESEARCH AND INNOVATION IN SOCIAL SCIENCE (IJRISS)
ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue VIII August 2025

Gender-Specific Challenges in Natural Resource Conflict Management: A Case Study of the River Rongai Area, Nakuru County, Kenya

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ABSTRACT

Natural resource conflict management is the strategies and practices employed a community to address disputes over natural resources. In the River Rongai area, this process is shaped by societal, cultural, and institutional factors that influence participation in peacebuilding. The area experiences sporadic water conflicts among smallholder farmers, large-scale farmers and domestic users. This study sought to examine the gender-specific challenges that affect participation in natural resource conflict management in the River Rongai area. An explanatory sequential mixed methods research design was adopted. The study population comprised stakeholders involved in water use from the river, from which a sample of 138 respondents was selected using multistage sampling. Purposive sampling was employed to select key informants, including community leaders and local government officers and focus group participants. Data were collected through participant observation, focus group discussions, and key informant interviews. Qualitative data were transcribed, coded, and analyzed thematically to identify emerging patterns, while quantitative data were analyzed descriptively. The results revealed notable gendered barriers to participation, including gender stereotypes, gendered divisions of labour and unequal access to decision-making spaces. Women, in particular, were underrepresented in key conflict resolution forums, while youth faced limited recognition of their role in peacebuilding. The study concludes that addressing gendered barriers through inclusive policy frameworks, capacity-building initiatives, and equitable representation in decision-making is essential for sustainable natural resource conflict management.

Key words: Gender, Natural resource conflic management, Peacebuilding

INTRODUCTION

Gender refers to socially constructed characteristics of femininity and masculinity, including cultural norms and roles attributed to women and men. Perceptions of and views on gender vary between societies and can change over time (Nagoshi *et al*., 2012). Gender inequality affects everyone, but can be particularly damaging for women and girls (UN WOMEN, 2017). The development sector has long been addressing gender, aiming to engage and empower women in the context of humanitarian and development interventions (UN WOMEN, 2017). There is evidence of change when women are intentionally considered in both policy and activities (Duffo, 2012; Taukobong et al., 2016). Many development organizations have developed gender policies that have progressed from simply including women and increasing their participation to a more transformative approach. This involves addressing deeply entrenched patriarchal systems, including cultural and traditional norms that underpin and exacerbate gender-based discrimination, exploitation and violence, and making this work an integral component of programmes and projects.

Natural resources conflicts often relate to disputes over rights to use, own or access land, water, forest resources or fisheries and to wildlife conflicts (Kyem *et al.,* 2021). Addressing NRCM through a gender lens involves looking beyond the visible, public aspects of inter-community disputes to explore the underlying dynamics within societies, communities and households as part of stakeholder analysis generally and gender analysis specifically (Ramirez, 1999). Taking a gendered approach helps to understand the distinct roles,