

**UNIVERSITY OF NAIROBI
DEPARTMENT OF HISTORY AND ARCHAEOLOGY**

**WATER-RELATED CONFLICTS IN THE MALEWA RIVER BASIN IN
NAKURU COUNTY, KENYA – 1980 - 2012**

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**A PROJECT PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR THE AWARD OF A MASTER OF ARTS DEGREE
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DECLARATION

I hereby declare that this project is my original work and has not been presented or submitted, in part or whole for any academic accreditation at any other university.

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DEDICATION

I dedicate this work to my mother, the wind beneath my wings.

ACKNOWLEDGEMENT

I thank God for His kindness and mercy during this academic journey. Special appreciation to my family for the support you have shown me in my life as a whole, your prayers and guidance in my career has kept me going. Utmost appreciation goes to my supervisors, Dr. George Gona and Dr. Margaret Gachihi who held my hands as I attempted to make sense of such a wide and complex topic. Thanks for the guidance and direction that birthed this document. I am also indebted to the entire department of History and Archaeology for their immense academic and professional input during my study. To my classmates, thanks for your cooperation and teamwork. The camaraderie we shared made classwork a breeze. To my colleagues at Water Resources Authority, you rearranged your schedules to accommodate mine and provided numerous contacts for my field work, I appreciate your thoughtfulness and sacrifice. Leah and Nina, the two of you were great sounding boards and voices of reason throughout the period when I was grappling with writing, thank you. Edwinah and my babies, thank you for providing a home away from home whenever I needed to unwind and be silly. And finally to the respondents I interviewed, thank you for giving of your time and for your willingness to provide the information that went into producing this document, you are much appreciated.

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LIST OF ABBREVIATIONS AND ACRONYMS

CAK:	Competition Authority of Kenya
CIDP:	County Integrated Development Plan
ESP:	Economic Stimulus Programme
FAO:	Food and Agriculture Organization
GERD:	Grand Ethiopian Renaissance Dam
IUCN:	International Union for Conservation of Nature
IDPs:	Internally Displaced Persons
LNBIMP	Lake Naivasha Basin Integrated Management Plan
LNGG	Lake Naivasha Growers Group
MCA:	Member of County Assembly
MENA:	Middle East and North Africa
NBI:	Nile Basin Initiative
NGOs:	Non-Governmental Organizations
PES:	Payment for Environmental Services
PRSP:	Poverty Reduction Strategy Paper
SCMP:	Sub-Catchment Management Plan
UN:	United Nations
WHO:	World Health Organization
WRUAs:	Water Resource Users Associations
WWF:	World Wide Fund for Nature

ABSTRACT

This study examines water-related conflicts in the Malewa River Basin between 1980 and 2012, with a focus on conflicts that arose with the introduction of new livelihoods in the area. Using library and field research techniques of text analysis and coding field interviews, respectively; the study discovered that prior to the introduction of horticulture, conflicts occurred between large-scale agriculturalists and cattle ranchers due to competition over the usage and access to land. The advent of flower cultivation caused disputes to increase because the amount of water required rose as horticulture and fish pond farming grew and expanded. Conflicts in the Malewa basin arise from a scarcity of water resources and a competition over the same.

CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

Water is a precious resource worldwide and is the mainstay of life. Socio-economic development, as well as plant and animal health, depend on water. Without water, life as we know it would be incomplete. Countries are faced with serious challenges in their efforts to sustain the swiftly intensifying water needs in their growing populations. Ashton observes that given the current exponential population growth across Africa and the attendant changes in water use, many countries will have overstretched their viable surface water resources before 2025.¹

Given the importance of water in life, it should not be surprising that it has led to several conflicts between different countries and people. Gusikit and Lar aver that among the earth's natural resources, water follows a close second after air and that contrary to what has been the norm in the past, where oil was the number one cause of conflicts in Nigeria, water has now taken over. They note that due to the high population growth, climate change, pollution and shrinking of surface water sources such as rivers and lakes and the attendant threats to ecosystems, water conflicts in Nigeria are inevitable.² In a bid to avert these possible conflicts over food scarcity and regional instability, the country has put in place several measures such as rainwater

¹ P.J. Ashton, "Avoiding Conflicts Over Africa's Water Resources," *AMBIO*, Vol 31, No 3, (2002) p.2

² R.B. Gusikit and U.A. Lar, "Water Scarcity and the Impending Water-Related Conflicts in Nigeria: A Reappraisal," *Journal of Environmental Science, Toxicology and Food Technology*, Vol 8, Issue 1 (Jan. 2014) pp. 20-22

harvesting, water resources management, channelization of River Niger, artificial water recharge among many others.³

Water is so vital for all of humanity's survival that countries like Kenya have enshrined it in her Constitution which recognizes water as an "economic and social right" that should be made sufficiently accessible to all citizens sufficiently while also ensuring cleanliness and safety.⁴ Further, the Water Act 2016 has also expanded the membership of the Water Tribunal; not only does it have more members but it is now present in more locations around the country, a move that is meant to make it more effective in dealing with water disputes as they arise.⁵

Increasingly, many scholarly arguments have surmised that most, if not all future conflicts in Africa and indeed the world over will be as a result of water. Starr, for example, observes that as far back as the mid- 1980s, intelligence services within the US government had approximated those wars over rapidly declining shared waters could occur in about 10 regions worldwide with the majority of these wars being experienced in the Middle East.⁶ Scholars anticipate that by the close of the 21st century, freshwater resources will have diminished significantly and that by 2050, rainfall might go down by at least 10 percent in Sub-Saharan Africa.⁷ As of 1955, worldwide, just seven countries were considered water-stressed but by 1990, the

³ Gusikit and Lar, "Water Scarcity and the Impending Water-Related Conflicts in Nigeria," pp. 25-26

⁴ Government of Kenya, *Constitution of Kenya*, 2010

⁵ Government of Kenya, *Water Act*, 2016

⁶ Joyce R Starr, "Water Wars," *Foreign Policy*, No 82, (1991) p.7

⁷ Anil Kumar Misra, "Climate change and challenges of water and food security," *International Journal of Sustainable Built Environment*, Vol 3, (2014) p.1

number had risen to 20 and scholars estimate that some 15 countries will join the list come 2025.⁸

Closer home, the Kenyan media has been awash with news of brewing water-related conflicts in various parts of the country and fears that certain proposed developments by individuals and the government will act as a hindrance to access to water and other livelihood activities.⁹ Specifically, Murang'a residents have faulted the government's plan of constructing the Northern Water Collector Tunnel, claiming that the project will only benefit Kiambu and Nairobi residents, sentiments shared by the County's leadership.¹⁰ Pundits note that the water crisis in the country has been exacerbated by the fact that Kenya experiences mostly moist climate and is also dry. Further, the country is also suffering from the negative effects of global warming as well as the lacklustre response from the government in investing in water resources.¹¹

Global estimates of water availability paint a bleak picture of a dwindling resource and the situation is especially dire in developing countries since there are no adequate systems in place for water recycling and wastewater treatment, as such, the available water resources are facing severe degradation due to intense competition.¹² Researchers have come to the conclusion that the next major conflict will indeed be

⁸ Misra, "Climate change and challenges of water and food security" p.1

⁹ Leopold Obi, "Famed Lake may lose some riparian land to key agency," *Daily Nation*, January 9, 2019. Accessed on August 26 2019, 11.40am. <https://www.nation.co.ke/lifestyle/dn2/Lake-Naivasha/957860-4927146-2s9g3x/index.html>

¹⁰ Charles Onyango-Obbo, 'Murang'a Governor, Wa Iria is not a mad man; he is the future,' *Daily Nation*, October 4, 2018. Accessed on August 26 2019, 11.35am. <https://www.nation.co.ke/oped/opinion/Wa-Iria-is-not-a-madman-he-is-the-future/440808-4790060-116j1h3/index.html>

¹¹ Samantha Marshall, "The Water Crisis in Kenya: Causes, Effects and Solutions," *Global Majority E-Journal*, Vol 2, No. 1(2011) pp. 31-33

¹² Joseph Alcamo, Petra Doll, Thomas Henrichs & Others, "Global estimates of water withdrawal and availability under current and future "business-as-usual" conditions," *Hydrological Sciences Journal*, Vol. 48, (2010) pp.339-348

over water because of the global decline in water resources that is now occurring, the continually growing population, and the importance of water to life. For instance, Wolf observes that unlike other resources, there is no substitute for water and international laws governing its use are weak and its need worldwide is “overwhelming, constant and immediate.”¹³ Subsequently, many scholars in the field of water resources have turned their attention to the possibility of “water wars” occurring.¹⁴ Starr makes an even bleaker pronouncement by stating that issues surrounding water security will soon be at the top of the agenda for war generals and defence ministries. She provides an example of Saudi Arabia where she notes that the provision of water is significant for the kingdom’s protection.¹⁵ Wolf also agrees with Starr that a lack of “clean freshwater” can create political instability which could, in turn be the perfect catalyst for festering violence.¹⁶

Water-related conflicts are triggered by various factors and conditions. For instance, Mbonile attributes conflicts in the Pangani River basin to migratory tendencies among local populations in the area as well as an increase in population which he says have deepened competition for the resource.¹⁷ Furthermore, decisions by past colonial administrations in the setting of national boundaries have also been a source of friction for many countries. Due to these decisions by colonialists, many African states share river systems without clear boundaries.¹⁸ Economically, socially and politically, these

¹³ Aaron T. Wolf, “Conflict and Cooperation along International Waterways,” *Water Policy*, Vol. 1, No.2, (1998) p.1.

¹⁴ Ibid. p.2.

¹⁵ Starr, “Water Wars,” p.19.

¹⁶ Wolf, “Conflict and Cooperation along International Waterways,” p.5.

¹⁷ Milline J. Mbonile, *Population, Migration, and Water Conflicts in the Pangani River Basin, Tanzania*, ECSP Report, Issue 12, p.20.

¹⁸ Patricia Kameri-Mbote, “Water, Conflict, and Cooperation: Lessons from the Nile River Basin,” *Woodrow Wilson International Centre for Scholars*, No. 4, (January 2007) p.3.

countries have strikingly diverse levels of development which means that the level of need for the available waters is also different, further complicating the exploration for fair and enduring answers to water supply issues.¹⁹ Thus, even though there have been no reports of any major conflicts as a result of water, the uneven distribution patterns of this resource have been a source of unrest politically which often threaten to turn into warfare.²⁰ Further, intense rivalry is birthed among states as they jostle to get the most out of the waters available. As observed by Ashton, this is a valid fear because practically all countries worldwide today are experiencing challenges of meeting the growing needs for water against a backdrop of fast-growing populations and a dwindling resource.²¹

In other instances, unfair water use practices have also contributed to the conflicts being experienced over water resources. Kasymov refers to them as “unilateral water policies” arguing that the one-sided changes to the directions of water flows are likely to fuel conflicts between countries along shared rivers because they will result in uneven distribution of water among states. He gives an example of the strains existing within the Tigris-Euphrates River basin which is shared by Turkey, Iraq and Syria. The fear is that Turkey’s project will may disrupt the level of waters in the two rivers, harming inhabitants of Syria and Iraq who also have claims to the waters.²² As the upstream nation, Turkey enjoys some considerable power over the use of the rivers

¹⁹ Ashton, “Avoiding Conflicts,” p.1

²⁰Shavkat Kasymov, “Water Resources Disputes: Conflict and Cooperation in Drainage Basins,” *International Journal on World Peace*, Vol 28, No 3, (September 2011) p.83.

²¹ Ashton, “Avoiding Conflicts,” p.1.

²² Kasymov, “Water Resources Disputes,” p.104.

and her leaders are of the view that with a rapidly growing population with more demands, having higher water allocations for her projects is not debatable.²³

This study sought to unravel some of the key elements that are likely contributors to the water-related conflicts around the Malewa River Basin with particular reference to the changing dynamics of conflicts over water resources that are a result of the introduction of “modern livelihoods and industries.” Aside from agriculture and ranching, the purpose of this study was to look into the impact of flower and fish farming on the aforementioned conflicts in the area. This study aimed at engaging in what the researcher views as a clash between tradition and modernity, where “old ways” of the use of the resource interact with “new ways” of the use of the same resource. The study was cognizant of the fact that there have been conflicts over water resources in the past around the Malewa River Basin and that these are probably still ongoing. What the study hoped to do, however, was to shed a spotlight on issues, post-introduction of the new livelihoods – in this context, flower and fish farming- and what effects they have had, if any, on the water-related conflicts in the basin.

²³ Kasymov, “Water Resources Disputes.” Ibid, p.105.

1.1 Background of the Malewa River Basin

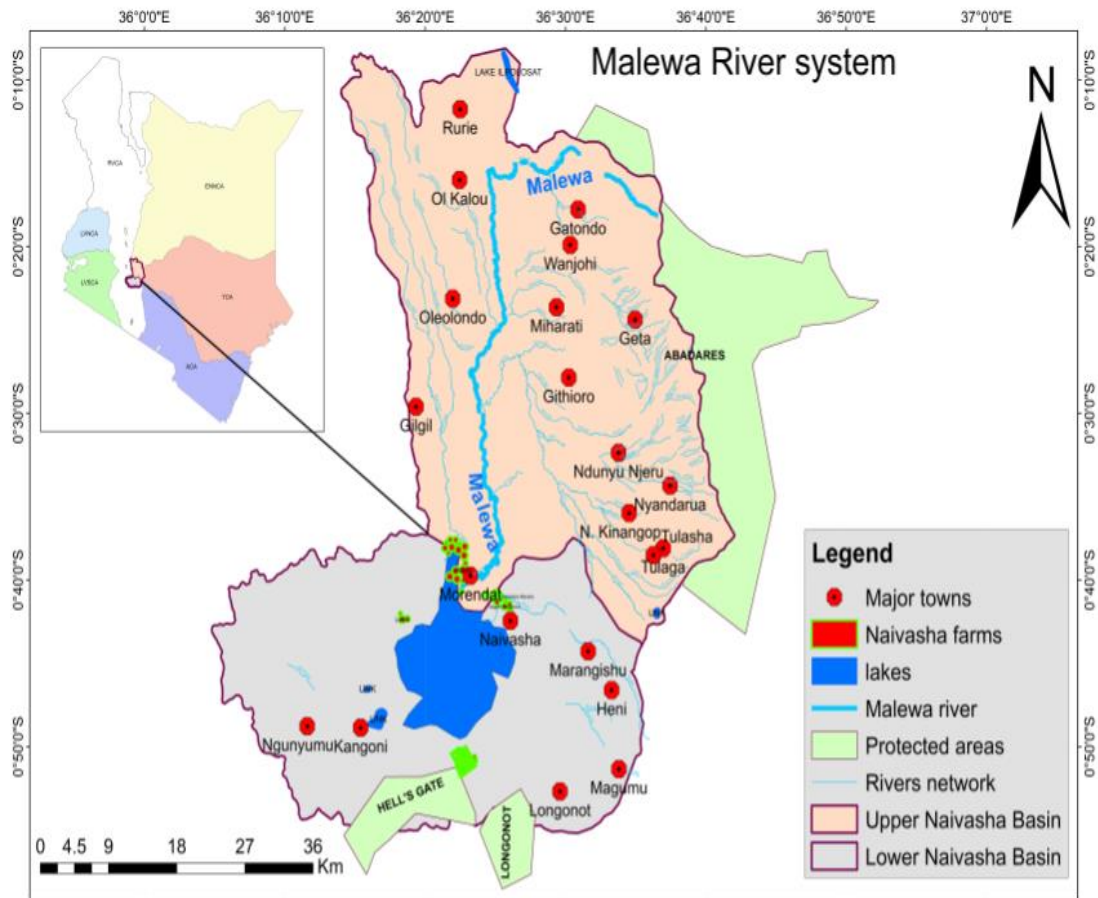


Figure 1.1: Malewa River Basin System

Source: Pauline Nyamu, Senior Hydrologist, Water Resources Authority

The Malewa River Basin is estimated to be an area of about 6,000 km² constituting Lake Naivasha Basin and the Malewa catchment. Lake Naivasha Basin is roughly 4,300km² while Malewa catchment roughly constitutes the remaining 1,700km². Malewa River, the main water source feeding into Lake Naivasha has its origins in the north western slopes of the Aberdares. Malewa River has two main tributaries, rivers Turasha and Wanjohi which drain the Nyandarua range.²⁴ Waters draining into the Malewa Basin originate from the woodlands of the Kinangop plateau and the

²⁴ WWF and CARE-Kenya, Payment for Environmental Services, An Integrated Approach to Natural Resource Management and Livelihood Improvement: A Case of Naivasha-Malewa Project, November 2010

Aberdares and eventually form into four major tributaries; Mugutyu, Turasha, Kitiri and Mukungi which flow north-south but eventually meander west to connect with the Malewa River.²⁵

Malewa has two rainy seasons, the long rains are experienced from March-May and vary from 600mm within Naivasha town to 1700mm in the Kinangop plateau. Short rains come about in October - November, categorizing Malewa as semi-arid. Temperatures dip in July and go up in March; February, July and December are the driest months.²⁶

The soils in Malewa are prone to erosion and compaction mainly due to the underlying bedrock. These characteristics, coupled with the various human activities have heightened land degradation. The vegetation is mostly scrub/bushland/native, grassland, moorland, bare/range and pockets of agricultural land. The upper catchment area, however, has plenty of forests, maize/wheat/potatoes/vegetable fields while the lower catchment is predominantly pastureland.²⁷

1.2 Statement of the Research Problem

A survey of the literature herein suggested that conflicts over water resources rotated around a lack of clear boundaries for the water resources, competition for water use needs between downstream and upstream users, natural and structural water scarcity, lack of clear laws and policies to reign in “offending” parties and rapid population

²⁵ L.P. Ogwenyo, J.M. Gathanya and PG Home, “Hydrological Analysis of Malewa Watershed as a Basis for Implementing Payment for Environmental Services (PES), *Department of Biomechanical and Environmental Engineering, Jomo Kenyatta University of Agriculture and Technology, Nairobi*. p.658

²⁶ Ibid p.660

²⁷ Musa Cheruiyot, Gladys Gathuru et al, “Land Cover Changes in the Malewa River Basin, Kenya,” *Journal of Environmental Science and Engineering*, (2018), p. 19

growth against the backdrop of a declining resource. Aside from these drivers of water resource conflicts, the literature also showed that efforts at reducing the potential for these conflicts to arise or the actual resolution to some of them have proved to be a challenge.

However, the research was devoid of any discussion of how the introduction of new livelihoods affects the usage of a resource and the resulting emerging or shifting conflict dynamics. This was an understudied subject area and research on the introduction of floriculture and fish farming as new livelihoods within the Malewa River Basin and their impact on the existing water conflicts and the steps that have been taken to try and resolve them was worth undertaking.

In particular, this study argued that although conflicts over water resources may not have been new in this region, the circumstances surrounding their occurrence varied over time and space. It also suggested that the introduction of new land-use techniques and new livelihoods may have had an impact on the conflict dynamics in this region.

1.3 Objectives of the Study

- i. To investigate water-related conflicts before the introduction of fish farming and floriculture in the Malewa River Basin.
- ii. To assess the nature and magnitude of the new livelihoods and their impact on the Malewa River Basin.
- iii. To examine the methods of conflict resolution applied to resolve these conflicts and their effects

1.4 Research Questions

- i. What was the nature of conflict over water resources in the Malewa River Basin before the introduction of fish farming and floriculture?
- ii. What has been the impact of the introduction of new livelihoods in the Malewa River Basin?
- iii. Which conflict resolution methods and with what effects, have been utilized to resolve water-related conflicts in the Malewa River Basin?

1.5 Justification of the Study

Water-related conflicts have received plenty of scholarly attention worldwide and rightly so since water plays a very significant role in everyday life. Of all of the world's most precious natural resources, water tops the list as being the most vital and thus cannot be done away with since the success of all of humanity's development aspects relies on it.²⁸

However, given the relatively new factors that are emerging in the debates surrounding peace and security analyses as well as the attendant economic factors, few systematic micro studies on the effects of the introduction of "modern" livelihoods and projects in the use of a common resource like the Malewa River exist.

The surrounding areas of Lake Naivasha have experienced spectacular growth in the last three decades as a hotspot for floriculture and horticulture, with the highest

²⁸ Ashton, "Avoiding Conflicts," p.1.

incidences of growth and expansion being recorded as early as 1980.²⁹ These tremendous developments have put a strain on the waters of the lake as well as other surrounding rivers which drain into it, notably Malewa River, the largest tributary with an annual flow of 153 million m³.³⁰ The Malewa River Basin straddles the Aberdare Mountains and Kinangop plateau to the east forming the Upper Catchment and the Mau escarpment to the west which is the lower catchment found within Naivasha town, well known for its export flower production zone³¹.

A tight balance exists between agricultural techniques like flower and fish production and water resource management. Fertilizers and pesticides are used in flower cultivation, while fish aquaculture can inject extra nutrients and trash into the water. Both contribute significantly to the economy, and in order to be effective, require water. As a result, increased water demand for irrigation in flower farming and ensuring adequate flow for the fish habitats poses the possibility of water related conflicts.³²

Consequently, the knowledge generated by this study will be significant in three ways: firstly, it will provide an avenue for the promotion of an understanding of the impacts of such economic endeavours to the water-related conflicts in an area; secondly, it will highlight the role of local initiatives and any potential contributions they might

²⁹ M. M. Mekonnen, A. Y. Hoekstra and R. Becht, "Mitigating the Water Footprint of Export Cut Flowers from the Lake Naivasha Basin, Kenya," *Springer Netherlands*, Vol. 26, 2012, p. 3726.

³⁰ Mark Everard, David Malcolm Harper et al, "The physical attributes of the Lake Naivasha catchment rivers," *Hydrobiologia*, November, 2002, p.13.

³¹ L.P. Ogweno, J.M. Gathanya and P.G. Home, "Hydrologic Analysis of Malewa Watershed as a Basis for Implementing Payment for Environmental Services (PES), *Kenya Industrial Research and Development Institute, Nairobi*

³² Gerda Kuiper and Andreas Gemalich, "Sustainability and Depoliticization: Certifications in the Cut Flower Industry at Lake Naivasha, Kenya," *Africa Spectrum*, 2017

make to fostering peace among the communities impacted by the establishment of these new livelihoods. Lastly, the study will attempt to contribute to the growing exciting conversation of how the introduction of new livelihoods to a region affects that region's conflict dynamics.

1.6 Scope and Limitation

This study confined itself to water-related conflicts from 1980. Commercial flower cultivation is said to have grown exponentially during this period as a consequence of government support through the Economic Stimulus Programme (ESP). Kenya's top region for growing cut flowers, which comes in third in terms of foreign exchange earnings behind tea and tourism, is Lake Naivasha. A significant portion of the Naivasha community relies on the flower farms businesses for employment, income, and provision of essential infrastructure like hospitals and schools.³³

After being singled out by the government for funding during the creation of the Poverty Reduction Strategy Paper (PRSP), aquaculture rose to prominence starting in the year 2001. Over the past 15 years, commercial fish farming has experienced tremendous growth; in Kenya's Vision 2030, it is considered as an avenue to resolving the country's three endemic challenges, lack of food, poverty and unemployment.³⁴

While commercial fish farming is practiced within the Malewa basin, it is highly concentrated in the upper catchment and less on the lower side, the study's focus area.

³³ Mekonnen, Hoekstra and Becht, "Mitigating the Water Footprint," p.2

³⁴ Kenya Marine and Fisheries Research Institute, *Kenya's Aquaculture Brief 2017: Status, Trends, Challenges and Future Outlook*, Kenya, 2017 p.2.

³⁵I chose this time period to be able to examine the history of the different water-related conflicts that have arisen along this basin and the results of the changes and development in land use over time.

Between 2009 and 2010, Kenya experienced a severe drought, putting many people at risk, particularly those living in arid and semi-arid regions. A number of livestock died.³⁶ The lengthy drought, coupled with the continuous over-exploitation of the lake led to the most significant drop of the waters of the lake and its tributaries since 1940s, casting a worldwide spotlight to the ecological devastation.³⁷

Naivasha town is considered semi-arid and depends on water for its livelihood, therefore the study was interested in discovering what impact, the drought may have had on water-related conflicts in the area and how the residents dealt with its repercussions. In order to effectively capture the concerns that emerged later as a result of the drought, the study's time frame ended in 2012 three years after the drought.

1.7 LITERATURE REVIEW

Shared waters can easily result in disputes and therefore scholars in the discipline of conflicts over water resources are becoming more and more enamoured by the intricacies of the relations prevailing among states or communities sharing this resource. A large and growing literature is increasingly being dedicated to addressing

³⁵ Mekonnen, Hoekstra and Becht, "Mitigating the Water Footprint," p.2

³⁶ International Livestock Research Institute (ILRI), *An assessment of the response to the 2008-2009 drought in Kenya*, 2011

³⁷ David M. Harper, Edward H.J. Morrison et al, "Lake Naivasha, Kenya: Ecology, Society and Future." *Freshwater Reviews*, (2011) Vol. 4, No. 2,

the various issues surrounding water-related conflicts and how and why they occur. The scholars have also looked at the factors which predispose parties to conflicts over water.

1.7.1 Impact of Old and New Agreements on Water Conflicts

Wolf observes that water tends to “induce cooperation” rather than war and this is evident in the myriad treaties and agreements that have been drawn to try and mitigate conflicts. He points out that for any kind of development to take place within a shared river, the parties around it have no choice but to cooperate. He refers to over 3600 treaties touching on water resources that have been catalogued by the UN FAO. In these treaties, the parties usually ensure that their “unique interests” are taken care of.³⁸ One such treaty is the 1997 United Nations Convention on Non-Navigational Uses of International Watercourses. This convention outlines two essential principles that nations are expected to adhere to when it comes to shared waterways: “equitable and reasonable use” and “the obligation not to cause significant harm” to neighbours.³⁹

However, just because certain situations have made the experience of war “bearable” in some situations through treaties does not mean that other regions of the world or perhaps even smaller places like the Malewa River Basin are immune. The treaties mentioned above are utilized as a basis for pre-empting the occurrence of conflict. Although the Malewa River Basin is tiny compared to other waterways that have drawn international treaties, it is a shared body of water that is likely to attract conflict

³⁸ Wolf, “Conflict and Cooperation along International Waterways,” p. 7.

³⁹ https://www.un.org/waterforlifedecade/transboundary_waters.shtml. Accessed on October 20, 2022 at 3.34pm

and therefore it was not out of the question that agreements may exist between the people using the river's waters to prevent conflict.

Interestingly, in other parts of the world, the opposite holds as has been established in the case of the Nile River Basin where Egypt's claim to the largest share of the waters, thanks to the old colonial agreements, has been a source of conflict. In the Nile Basin, a lack of a robust agreement has been a source of constant squabbles among the riparian states who feel that the old agreements were skewed towards Egypt's gains. Kameri-Mbote talks about this old agreement - a past colonial administration policy that gave Egypt and Sudan absolute rights to use 100% of the Nile waters thus giving them an unfair advantage over the other states sharing the Nile – Burundi, Eritrea, Ethiopia, Rwanda, Tanzania, Uganda, Kenya and the Democratic Republic of Congo.⁴⁰ Kameri-Mbote's work was important for this study in that it laid bare the question of the downstream-upstream relationship arising from the use of the waters of Malewa River Basin and whether or not there was a similar feeling of injustice by upstream communities in the use of the resource. Wiebe reiterates that proper instruments and agreements are the answer to resolving the perennial water-related conflicts. She notes that parties to these conflicts have realized the significance of having agreements that define and govern how the shared resource will be used, especially in the case of transboundary waters. She refers to the old agreements made by the British colonialists over the Nile Waters as insufficient since most were selfish

⁴⁰ Kameri-Mbote, "Water, Conflict and Cooperation," p.3.

and only served the colonialists interests while pitting the riparian states against each other.⁴¹

Yoffe, Wolf and Giordano also present a case for the presence of robust institutions and agreements in countries with shared water resources which should be thoroughly equipped and enabled to effectively handle water resources and all their attendant issues. They underscore the important role that these institutions and agreements play in mitigating conflicts over water resources as they will provide solutions and allay doubts whenever they appear. Laying special emphasis on “international freshwater treaties” as being drivers of avoiding uncertainties, Yoffe, Wolf and Giordano observe that historically, countries always tend to choose cooperation over conflict and this should be encouraged.⁴²

These findings echo those of other scholars like Okidi who feel that Egypt’s instigation to the other Nile riparian states to join her in a war against Ethiopia based on the 1929 and 1959 treaties which gave her veto power over the Nile Waters by having a majority share was not reasonable. Dialogue should have been the first option; he touts the NBI as a tool that can be put to good use by the Nile riparian countries. In Kenya and more specifically within the water sector, the Water Resource Users Associations (WRUAs) are the closest semblance of an institution specifically dedicated to mitigating water-related conflicts amongst other things; this study examined how the WRUAs had fared in the case of the Malewa River Basin.

⁴¹ Kristin Wiebe, “The Nile River: Potential for Conflict and Cooperation in the Face of Water Degradation,” *Natural Resources Journal*, Vol. 41, No.3, (2001) p. 754.

⁴² Shira Yoffe, Aaron T. Wolf and Mark Giordano, “Conflict and Cooperation over International Freshwater Resources: Indicators of Basins at Risk,” *Journal of the American Water Resources Association*, Vol. 39, no. 5, (October 2003) p. 1124.

1.7.2 Upstream-Downstream Issues

Conflicts over water also tend to arise over the activities of the users upstream or downstream. Ashton notes that this is especially common within countries that have a shared river basin adding that of the cases reported, the complaints are usually related to accelerated water use by “upstream” states together with high levels of pollution which has harmful repercussions on the “downstream” states⁴³. Wolf singles out the frosty relations between India and Bangladesh thanks to a barrage that India built at Farakka in 1975. The barrage has interfered with a percentage of the flow of the River Ganges into Bangladesh, a downstream riparian. The barrage resulted in decreased upstream flow which has brought about lots of negative effects. Bangladesh relies on the flow of the Ganges to meet its food and water demands. As a result, Bangladesh nationals resorted to seeking refuge in India to continue enjoying the benefits of the river Ganges.⁴⁴ Did the users of the Malewa River Basin experience conflicts with such far-reaching effects?

Wolf also notes that some treaties have served as catalysts for increased upstream/downstream conflicts; he singles out the 1997 Convention on the Non-Navigational Uses of International Watercourses Commission as being obscure when it comes to the eligible and aquatic issues.⁴⁵ He notes that the document advocates for impartial use of water on the one hand while on the other, it stresses on the commitment not to harm others materially. During conflicts, upstream users have placed prominence on impartial use while downstream users prefer the commitment

⁴³ Ashton, “Avoiding Conflicts,” p.9.

⁴⁴ Wolf, “Conflict and cooperation along international waterways,” p.5.

⁴⁵ Ibid p.2.

not to harm others materially principle. The Convention also fails to offer practical procedures for water apportionment, the biggest catalyst for most water-related conflicts. From Wolf's observation, it is clear that the downstream users rarely have any power or benefits as they seem to bear the brunt of the water's negative effects. For example, pollution upstream usually interferes with the water's quality downstream, over-abstraction upstream results in low water levels for the downstream users among other disadvantages.

Interestingly, in the Nile Basin, however, this situation changes, as observed by Wiebe who points out that Egypt, the downstream riparian, enjoys a position of authority – an old agreement accords her the largest share of the waters, she boasts a great military and is powerful economically.⁴⁶ It was worth finding out what kind of power play, if any, existed with the upstream and downstream users of Malewa River. Was there a group that felt that they had more rights to the waters than the others? If so, what or who granted them these privilege?

Water pollution or water degradation is another issue that fuels conflicts among users upstream and downstream. Wiebe points out that degradation usually occurs because of several factors: altering the water paths through dams and canals, over-abstraction for industrial use, siltation due to waste dumping by industries among other factors.⁴⁷ She avers that along the Nile River Basin, the construction of the Aswan Dam in Ethiopia has been a source of friction. Alongside its many benefits, the dam has also been a cause of decreased water flows into Egypt, the downstream riparian, since most of the water is stored in the dam's reservoir. Furthermore, farmers in Egypt were

⁴⁶ Wiebe, "The Nile River: Potential for Conflict and Cooperation," p.731.

⁴⁷ Ibid pp.736-737.

forced to acquaint themselves with the application of artificial fertilizers into their farms since their farms no longer received the high-in-minerals silt from Ethiopia because flooding stopped with the construction of the dam.⁴⁸ This study sought to find out the nature of conflicts between Malewa River's upstream and downstream users. Were there any specific water use activities that are practised either upstream or downstream that ended up impacting either side positively or negatively?

Ashton notes that indeed the potential for conflict is especially heightened between downstream and upstream states, and more so in instances where one country is militarily and politically stronger than the other but that regardless of this status quo, there has been no actual conflict recorded as having been borne out of this issue.⁴⁹ Ashton also notes that the national boundaries that were set by past colonial administrations are obscure as they didn't follow the river catchments and as a result, most of the large river systems are shared by several countries. This has in turn resulted in competition among these countries as each one tries to derive as much benefit as they can from the shared resource. Although hidden, the competition between upstream and downstream countries, as is the case between Egypt and the other countries along the Nile represents the biggest risk of conflict over water.⁵⁰ Along the Malewa River, such competition was indeed observed and was singled out by a number of the respondents as a constant source of friction.

Still, on the waters of the Nile River, Kameri-Mbote advances the potential for conflict component by looking at the situation of the states along the Nile River. The

⁴⁸ Wiebe, "The Nile River: Potential for Conflict and Cooperation, p. 738.

⁴⁹ Ashton, "Avoiding Conflicts," p.9.

⁵⁰ Ibid.

downstream nation, Egypt, despite having the strongest military in the region, harbours fears that the upstream nations may construct dams without its consent and thus interfere with her water supply.⁵¹ Indeed the construction of the Grand Ethiopian Renaissance Dam has been a thorn in the flesh for Egypt and even resulted in war threats; however, the two countries agreed to dialogue and reach conditions favourable to both.⁵² Regarding Egypt's claim that the construction of the Grand Ethiopian Renaissance Dam would interfere with her water security, Okidi notes that water's nature does not allow for a completely equitable allocation among users,. He observes, however, that it is possible to minimize conflicts along those lines by ensuring that the stakeholders' needs are considered at the various points that they come into contact with the water. The challenge then is to find a common ground where all these needs can be satisfied without jeopardizing the resource.⁵³

1.7.3 Scarcity vis-à-vis Abundance and Water Conflicts

Water availability vis-à-vis its scarcity is another component of water conflict that affects the resource's users either adversely or positively, depending on their status. The Middle East nations are ranked as having the lowest per capita water consumption in the global rankings, a situation that is further exacerbated by their rapidly growing populations. This situation has resulted in tensions among the states as they compete for a scarce resource, as observed by Lowi.⁵⁴

⁵¹ Kameri-Mbote, "Water, Conflict and Cooperation," p. 3.

⁵² Okidi, "Nile Waters: The Threat of War is not Justifiable in Modern Times," p.177.

⁵³ Ibid p.180.

⁵⁴ Lowi, "Rivers of Conflict, Rivers of Peace," p.124.

Adding his voice to the debate on water scarcity being a precursor of conflict is Obioha in his study of the inter-linkages between the inadequacy of resources and the occurrences of violent conflicts in the North-Eastern Nigeria region.⁵⁵ Obioha observes that in North-East Nigeria, lives are constantly disrupted with great damage to people, livestock and the environment due to the frequent conflicts which are fuelled by water scarcity occasioned by the meagre rainfall.⁵⁶ The pastoralists require pasture for their livestock while farmers are keen on maximizing the meagre resources to grow food crops. These conflicts that mainly occur between ethnic groups, within ethnic groups or “even personal” are usually ferocious and protracted and the aftermath extends to the international borders.⁵⁷ The goal of this study was to find out whether something similar had happened within the Malewa basin. Conflicts over the usage of water and land to meet either demand seemed inevitable given that the region is semi-arid and is home to both pastoralists and farmers.

The world is currently experiencing a decline in the quantity of water available per person. With Africa’s decline being most intense, experts estimate that by 2025, 65 per cent of the African continent will be facing water scarcity, up from 47 per cent in 2000. It is worth noting that these trends are not uniform across Africa, while some areas will face scarcity, others will enjoy abundance.⁵⁸ These numbers are in comparison to the water available vis-à-vis the population growth and with the current growth trends, we can safely surmise that the situation is likely to move from bad to worse. The ongoing civil war in Syria traces its causes partly to water scarcity as

⁵⁵ Emeka E. Obioha, “Climate Change, Population Drift and Violent Conflict over Land Resources in Northeastern Nigeria,” *Journal of Human Ecology*. Vol. 23, No. 4, (2008) p.312.

⁵⁶ *Ibid*, p. 317.

⁵⁷ *Ibid*,

⁵⁸ Ashton, “Avoiding Conflicts,” p. 6.

espoused by Gleick in his study of the causes of the conflict in Syria. He argues that while Syria has always been susceptible to drought due to its inconsistency hydrologically, as indeed is the norm in the MENA regions, in 2006 – 2011, the country suffered very severe droughts that resulted in the dislocation of the populace. Syria records an annual rainfall of below 250mm placing it in the confines of a water-scarce country.⁵⁹ As already noted, the Malewa basin is classified as semi-arid to humid with two rainfall patterns every year. The available water resources are heavily utilized by the flower and fish farms in addition to the livestock and agricultural activities as well as domestic needs. According to Kyambia and Mutua, the Lake Naivasha basin, where the Malewa River basin is situated, is already facing water stress; out of the 1000 m³ that the WHO recommends, the basin records 647 m³. By 2025, this amount will reduce to 235 m³ because of the ravages of climate change.⁶⁰ This is a scenario that is likely to result in some form of friction and the research's intent was to find out if the residents harboured such concerns.

1.7.4 Rural-Urban Migration/Population Growth

The rural-urban migration is another potential area for conflict over water resources as has been exemplified by Uitto and Duda. They draw a nexus between the growth in urban centres and water-related conflicts. They aver that water quality and quantity is directly affected by pollution resulting from the various industries in the urban areas as well as the growing populations. Uitto and Duda further note that out of the more

⁵⁹ Peter H. Gleick, "Water, Drought, Climate Change, and Conflict in Syria," *Pacific Institute, Oakland, California*, (2014), p.332.

⁶⁰ Marshal M. Kyambia and Benedict M. Mutua, "Detection of trends in extreme streamflow due to climate variability in the Lake Naivasha basin, Kenya," *International Journal of River Basin Management*, Vol. 13, No. 1 (2015) p.97

than 6 billion world inhabitants, more than half are found in urban areas and mostly in what they refer to as the developing world's big unplanned cities that are expanding at a rapid rate.⁶¹ Malewa River serves the needs of both urban and rural folk; this study wanted to know whether this factor plays out in the area as well. Particularly, the researcher sought to find out whether the growth of the horticulture and aquaculture industries have had any impact on the people's water needs.

Kasymov talks about the link between water scarcity and population growth observing that the biggest headache in the 21st century is the increasing competition among states for an increasingly dwindling resource, water. The world population currently stands at 7.8 billion and is expected to grow while the freshwater resources expected to serve the needs of this growing populace remain constant. He refers to the more than 1 billion people who cannot access fresh water for drinking and a further 2.4 billion people with no access to sufficient sanitation.⁶² As the study found out, Naivasha's population has since increased along with the flower farms' expansion which has also resulted in increased abstraction of water from sources such as the groundwater, the lake and from the rivers feeding the lake, one of which is Malewa.⁶³

1.7.5 Structural Scarcity and Water Conflicts

Kasymov singles out one-sided water rules as a principal driver of the partisan strains and conflicts being experienced in the Aral Sea, Jordan River, India, and Tigris-

⁶¹ Juha I. Uitto and Alfred M. Duda, "Management of Trans Boundary Water Resources: Lessons from International Cooperation for Conflicts Prevention," *The Geographical Journal*, Vol. 168, No. 4, (December 2002) pp.365-378.

⁶² Shavkat Kasymov, "Disputes over Water Resources: A History of Conflict and Cooperation in Drainage Basins," *Peace and Conflict Studies*, Vol. 18, No. 2, (2011) p. 293.

⁶³ Mekonnen, Hoekstra and Becht, "Mitigating the Water Footprint," p. 3732

Euphrates. These water-related policies have resulted in unequal distribution of the precious commodity as well as heightened demand for freshwater. He, however, notes that no actual conflict has occurred among the states that share the Tigris-Euphrates River Basin despite there being high political tensions as a result of an unbalanced distribution of the resource.⁶⁴

1.7.6 Resolving Water Conflicts

Most of the literature on water-related conflicts agree on one thing: that in as much as water issues tend to court conflicts, they are also the biggest driver for cooperation among conflicting parties. The need to conserve the water for the benefit of all is greater than the need to fight over it hence the many treaties that have been signed-in a bid to marry the different aspects of international waters in a way that satisfies all the players in a given area. The UN Convention on the Non-Navigational Uses of International Watercourses (1997) is one such cooperative agreement.⁶⁵ And even though water-related conflicts have since arisen over the Nile, there is a common framework from which to address those issues as they arise.⁶⁶ In the case of the Malewa River Basin, the study intended to find out if there had been need for any such cooperative measures on a smaller scale given the size of the basin and whether they had been instrumental in averting water-related conflicts.

The collective benefits which accrue to the conflicting parties from a shared water source is another reason touted by scholars as to why we are yet to witness a “water war”. Wolf notes that the treaties drawn out go to great lengths to outline in detail

⁶⁴ Shavkat Kasymov, “Disputes over Water Resources,” p.317.

⁶⁵ Wolf, “Conflict and Cooperation,” p. 2.

⁶⁶ Kameri-Mbote, “Water, Conflict and Cooperation,” p.3.

what each of the users along a given water body stands to gain and this keeps conflicts under check. He provides an example of the 1986 Lesotho Water Project Treaty – South Africa got to have drinking water after agreeing to assist in funding a hydroelectric water diversion plant in Lesotho while Lesotho became the beneficiary of all the power generated.⁶⁷

Overall, the result of the literature analysis conducted here demonstrated that, despite the fact that water has the ability to foster both conflict and collaboration in equal measure, the threat of conflict looms over peoples' heads all the time. A crucial barrier against the onset of water-related warfare is the presence of strong institutions with the accompanying authority and support from all relevant sectors and corners.

1.7.7 Theoretical Framework

This study was premised on Thomas Homer-Dixon's Environmental Scarcity Theory, also referred to as Resource Scarcity Theory which makes a case for the existence of a relationship between scarcity of resources and conflicts.⁶⁸ Homer-Dixon attributes the conflicts and tensions being experienced around the world to the fact that renewable resources are steadily dwindling thus inducing competition which in turn leads to conflicts among communities or states. He also argues that soon, conflicts around the world will escalate as the scarcity worsens and that the most affected will be poor communities.⁶⁹

⁶⁷ Wolf, "Conflict and Cooperation," p.7.

⁶⁸ Thomas F. Homer-Dixon, "Environmental Scarcities and Violent Conflict: Evidence from Cases," *International Security* 19, No.1 (1994) pp.5-40

⁶⁹ *Ibid.*

Homer-Dixon posits that environmental scarcity appears in three forms: Demand-induced scarcity where population growth exerts pressure on the existing resources; supply-induced scarcity that is caused by human activities destroying the resource at a much higher rate than how it is produced naturally by the environment and structural scarcity which occurs as a result of a deliberate move to concentrate resources among a few powerful/or elite groups in the society.

Homer-Dixon's theory, has, however, been criticized for generalizing on an otherwise complicated concept. Critics have pointed out that there are many other factors in society that have no direct impact on the environment and yet contribute to conflicts. Gleditsch and Urdal for instance argue that it is too simplistic to state that conflicts occur mainly because of competition for resources in the environment. They make a cause for man's ingenuity and point out that humans are masters at finding solutions for issues that plague them and have been known to be hardy and adaptive to environmental changes, opting instead to come up with solutions to counter the scarcity instead of resorting to violence. Besides, there is seldom absolute scarcity; people have improved technologically and are able to provide replacements where needed. Further, international trade has also made interactions easier thus providing solutions for a majority of what the world's inhabitants may require. They argue that instead of scarcity leading to conflicts as has been opined by Homer-Dixon, it has provided an opportunity for people to be innovative and resourceful.⁷⁰

⁷⁰ Nils Petter Gleditsch and Henrik Urdal, "Eco-violence? Links between Population Growth, Environmental Scarcity and Violent Conflict in Thomas Homer-Dixon's Work." *Journal of International Affairs* 56, No. 1, (2002) pp 283-302. Accessed February 17, 2020 at 12.43pm. www.jstor.org/stable/24357893.

Despite these criticisms, Homer-Dixon's theory was relevant to this study because it framed pertinent issues that were utilized in trying to understand why conflicts occur and especially conflicts over natural resources, but specifically water-related conflicts which was the focus of this study. Demand-induced scarcity as posited by Homer-Dixon was evidence within the Malewa River Basin following an increase in the population of Naivasha as a result of the establishment of the flower farms which led to competition for the water resource as well as for other social amenities. Instances of conflicts between fishermen and the flower farms and hotels located along the lake were also reported as the former no longer has access to the lake as they used to do.

The pastoralists, whose primary concern is providing water for their livestock, were also involved in disputes with hotels and flower farms over access to the lake waters. Human activity in the lake has increased as a result of a population struggling to survive in the face of dwindling resources. Lake Naivasha is the region's only freshwater lake⁷¹ and it serves as the primary source of water for the communities surrounding Naivasha town and its environs.⁷² Homer-Dixon also makes a case for the linkages between environmental scarcity, population growth and conflict. The rapid expansion of the flower industry has resulted in what experts refer to as "virtual water trade" meaning that with every single rose that Kenya exports, a certain amount of water is exported as well since a flower is 90 percent water.⁷³ The water is steadily but surely dwindling as a result of the abstractions by commercial and smallholder

⁷¹ Mark Everard, Jacqueline A. Vale, Hakan Tarras-Wahlberg and David Malcolm Harper, "The Physical attributes of the Lake Naivasha catchment rivers," *Hydrobiologia*, (2002) p.13.

⁷² Becht, "Environmental Effects of the Floricultural Industry," p.4.

⁷³ The Council of Canadians, "Lake Naivasha Withering Under the Assault of International Flower Vendors," (2008) Accessed on Feb 26 2020 at 12.45pm
www.blueplanetproject.net/documents/Naivasha_Report.pdf

farmers, not to mention the attendant contamination of the water from toxic waste in the fertilizers and pesticides being used.⁷⁴ These industries have also seen an influx of people migrate to the town and its environs in search of employment in the greenhouses and processing factories, putting a strain on the existing social amenities and the environment.⁷⁵ Several respondents mentioned how the population in Naivasha town had grown due to the rise of the flower industry, which has resulted in competition for the water resource among other amenities.

1.7.8 Research Hypotheses

This study tested three hypotheses:

1. Upstream-Downstream conflicts dominated the water-related conflicts along the Malewa River Basin before the introduction of fish farming and floriculture.
2. Malewa River Basin conflicts are not a consequence of the introduction of fish and flower farming.
3. The conflict resolution methods applied in resolving the conflicts have been effective.

1.7.9 Methodology

Several secondary and primary data collection techniques were used in this study. Online scholarly journal articles, organizational reports and position papers, published theses and dissertations, and internet news items were some examples of secondary

⁷⁴ Mekonnen, Hoekstra and Becht, "Mitigating the Water Footprint," p.1

⁷⁵ The Council of Canadians, "Lake Naivasha Withering,"

sources. To gather data relevant to the topic at hand, content analysis was used. Through this investigation, the researcher was able to learn more about the nature of water conflicts generally as well as the associated conflict resolution techniques that have been employed in many nations worldwide, particularly in Kenya and more specifically in the study area of the Malewa River Basin.

A research permit was obtained from the National Commission of Science, Technology and Innovation (NACOSTI). This gave the researcher permission to conduct in-person interviews with key informants and subsequent interviewees who were suggested to the interviewer by the key informants. The data collection area was the Lower Malewa River Basin which is within Naivasha Sub-County, however, the researcher also talked to respondents from Upper Malewa within Nyandarua County following suggestions by some informants that Upper Malewa WRUA was better placed to discuss some of the emerging issues. This was required for the study to comprehend the water usage activities that dominate the river as it snakes its way downstream from the upper portion. As a result, in addition to Naivasha town, the researcher also went to Gilgil, Kabati, and Ol Kalou towns to speak with community groups known as WRUAs that are responsible for water conservation in those areas. The researcher found the WRUAs to be especially helpful in examining the relationships between water users upstream and downstream as well as the implications of land use activities.

A total of 25 informants drawn from flower and vegetable farms, NGOs working in water-related issues in Naivasha, hotels in the tourism sector, government agencies and WRUAs were interviewed. The key informants who were identified using purposive sampling, were the flower farms, hoteliers in the area, heads of government

agencies, and managers of the NGOs operating within the Malewa River Basin. This is because they are the gatekeepers to the information that was being sought owing to the positions they hold and the spaces they occupy around the area of study. Flower farm owners and hoteliers engage in businesses that require large amounts of water to run and this presented them as some of the biggest stakeholders in the water issues in the area. Government agencies, WRUA members and NGOs are engaged in ensuring the proper management and regulation of the water resources and so they also made for great key informants because they had information regarding water use and other issues. The snowball sampling technique was used to gain additional interviews, with key informants providing information about other people they believed could help the researcher learn more.

While conducting the research, the researcher encountered significant hurdles. Many of the informants were hesitant to meet the interviewer in person because the country was still coming to terms with the impacts of Covid-19 and the government's response measures. The researcher was successful in convincing such informants to meet while adhering to the necessary social distancing rules. Additionally, the majority of the businesses the researcher visited allowed the employees to work from home which decreased the number of staff members available and made it challenging to locate the right informants without making repeated trips and phone calls in an effort to reach them.

For the informants who were utterly opposed to actual meetings, the researcher utilized zoom and Google Meet calls. The informants from flower farms proved to be the most difficult to convince since they were highly sceptical of the interviewer's intentions and sent her away from more than three farms without having a

conversation with anyone in management. After mentioning her situation to another interviewee who just so happened to have close ties to some of the farms and could serve as a liaison for her, the researcher was eventually granted interviews at two farms. The researcher could not conduct an interview at the second farm she visited because the owner was away and those present lacked the authority to carry on with the exercise in his absence. The researcher initially intended to hold Focused Group Discussions with workers from the flower farms. She was told when she asked that she could only speak to one employee at a time and that the conversation would be supervised. She decided against interviewing them.

The interviews were conducted through the help of general question guides for the various categories of informants that the study targeted. The interviews were conducted in a semi-structured manner, where the researcher explained key aspects and then allowed the respondents the freedom to respond by presenting their understanding of the questions as they were posed to them. This method enabled the researcher to collect details, explore topical areas, probe and provide clarifications while observing the emotions and reactions of the respondents. In some instances, especially while talking to the WRUA members, the interviewer had to translate some of the questions into Swahili for better understanding. Once the informants had given their consent, the researcher occasionally took notes while the interviews were being recorded on tape. The researcher was able to completely focus on the interviews and be present. The researcher utilized public means of transport to get to the flower farms and for the visits to the villages in Gilgil, Kabati and Ol Kalou, Despite the fact that most of the interviews were scheduled in advance, the researcher was disappointed on many occasions when the interviewees either did not show up or

were unable to take part in the interview because of personal reasons. In these situations, the interviewer requested rescheduling and in the instances it was granted, she went back to conduct the interviews. In one instance, the researcher had to wait by the roadside in scorching heat as an interviewee fed and watered his cattle before he could give her audience. This was on the third visit. Due to the aforementioned challenges, the researcher had to travel to Naivasha twice.

The interviews were transcribed and coded into broad themes which were broken down further into smaller themes. The researcher then framed discussions by using the similar themes that appeared throughout the transcriptions. Specific themes were then grouped to reflect the objectives of the study while positioning this information with secondary data to prepare the project report. For clarification and support, the researcher also used verbatim quotes.

CHAPTER TWO

WATER-RELATED CONFLICTS WITHIN THE MALEWA RIVER BASIN DURING THE COLONIAL PERIOD

2.0 INTRODUCTION

This chapter explores the various types of water-related conflicts that have occurred in the Lake Naivasha Basin. It limits itself to the conflicts that existed prior to the introduction of flower and fish farming, which I refer to as new livelihoods for the purpose of this study.

The majority of those who took part in the study agree that the basin is facing a lot of challenges in the form of conflicts that can be traced to the water resource exploitation and access. Since Malewa and Turasha River Basins make up 50 per cent of the larger Lake Naivasha Basin,⁷⁶ tensions within the Naivasha Basin are inevitably experienced in the Malewa River Basin as well. Fayos asserts that the historical colonial land use and land tenure practices have affected Naivasha's socio-economic status to date.

Since colonization, the land usage and tenure systems have gone through several stages. This land tenure and land usage which is mostly agricultural has undoubtedly had a significant social, economic and emotional role in the formation of present day land and water-related disputes.⁷⁷ Ranching was the most common occupation for the colonialists in Naivasha during the colonial period, because the semi-arid climate was

⁷⁶ Owino, Gathenya and Home, "Hydrological Analysis of Malewa Watershed," p.658

⁷⁷ Carolina Boix Fayos, "Competition over water resources: analysis and mapping of water-related conflicts in the catchment of Lake Naivasha," Thesis, *International Institute for Geo-information, Science and Earth Observation*, 2002

unsuited for agriculture, with sisal being the only plantation crop. To make watering easier, Irish potatoes were planted along the lake's shore.⁷⁸ Kuiper and Greiner support Fayó's assertion arguing that because Naivasha was a European settler area, there was no opportunity for Africans to own land, but that even after colonization, when a few wealthy Africans were able to own land, the ownership was still laced with vestiges of foreign domination. When you joined forces with outsiders, it was simpler to possess land as an African.⁷⁹

According to Kuiper and Greiner, in addition to the thriving horticultural sector, the rapidly growing tourism sector also contributed to Naivasha's rapid growth by attracting skilled workers and affluent investors who saw the gaps that needed to be filled in the provision of social amenities such as housing and recreational facilities like shopping malls.⁸⁰ According to the 2009 Census report, the population of Naivasha is now estimated at 380,000 people⁸¹ up from 95,339 in 1979.⁸² As a long-term employee of La Belle Hotel, which is located in the heart of Naivasha's Central Business District observed, these developments and the increase in population have no doubt increased the pressure on water:

There were years that we had a lot of water problems. I joined this hotel in 1996. It was established in 1922 and from the history I have heard from others, there were times we have had to buy water and we still do so today once in a while when

⁷⁸ Gerda Kuiper, Naivasha's History: From Livestock to Flowers. In: *Agro-industrial Labour in Kenya*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-18046-1_2

⁷⁹ Gerda Kuiper and Clemens Greiner, Export horticulture and labour migration in Kenya: Translocality and transiency in a secondary town, *Geoforum*, Vol. 122,(2021),p.3

⁸⁰ Ibid

⁸¹ Kenya National Bureau of Statistics, , Kenya Population and Housing Census 2009, Ministry of State for Planning, National Development and Vision 2030, Nairobi, Kenya. 2010

⁸² Kenya Central Bureau of Statistics, Kenya Population Census 1979, Ministry of Economic Planning and Development, Nairobi, 1981. Quoted in Gerda Kuiper and Clemens Greiner, Export horticulture and labour migration in Kenya: Translocality and transiency in a secondary town, *Geoforum*, Vol. 122, 2021, p.4

need arises. We have many hotels surrounding us and many lodgings. This town is very busy and all these businesses need water to run efficiently. So whenever we have water issues, as a business, we have to spend a lot of money to take care of it and ensure that our guests are comfortable and this has been the case for around the last 15 years.⁸³

2.1 WATER-RELATED CONFLICTS BEFORE THE INTRODUCTION OF NEW LIVELIHOODS

2.1.1 Conflicts over land ownership, access, and use

White explorers' pre-colonial narratives about Naivasha paint a picture of a lonely, uninhabited environment, conveniently disregarding the reality of Kikuyu traders and Maasai pastoralists who are said to have roamed the Savannah around Lake Naivasha. Due to this accounts, Naivasha became connected with the “White Highlands” that were reserved for colonialists. The majority of the area was used as grazing land for the pastoralists’ communities, particularly the Maasai.⁸⁴

The colonialists’ dominant economic activity was cattle ranching which was practiced alongside farming of vegetables, Irish potatoes and fodder crops on extensive plots of land which were primarily for domestic consumption and were therefore not labour-intensive. The south side of Lake Naivasha had a large sisal plantation. The lake water was utilised to irrigate these parcels of land but not extensively.⁸⁵

⁸³ Oral interview, Joseph Kuria, La Belle Hotel, Naivasha, 15th July 2021

⁸⁴ Gerda Kuiper, Naivasha’s History: From Livestock to Flowers. In: *Agro-industrial Labour in Kenya*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-18046-1_2

⁸⁵ Robert Becht, Environmental Effects of the Floricultural Industry on the Lake Naivasha Basin, *International Institute for Geo-Information Science and Earth Observation*, (2007), p.5

During this period notably in 1929, Naivasha landowners formed the Lake Naivasha Riparian Owners Association “with the objective of arbitrating on conflicts related to land use around the lake, and it was established together with an agreement with the then government.”⁸⁶ An informant avers that,

Before irrigated agriculture, the population around Naivasha was I think less than 50,000. Then, we had vast chunks of land under private ownership. Then during that time, land use was mainly closer to the lake and it was Irish potato farming, some bit of Lucerne and ranching mainly so whatever was being done for the commercial venture was not water-intensive. The only issue then was pastoralists’ access to the lake and a few access points were left for them so water issues were not hot by then, not unless we had a drought and that is when pastoralist communities from Kajiado and Narok used to come and that posed a challenge to the landowners. Additionally, because the pastoralist communities have a history of cattle rustling, the landowners used to lose some of their stock whenever they were around so it was more of a security-related and livestock-related issue and also livestock diseases but not water.⁸⁷

The ranch owners would engage in the occasional land use disputes, which was mostly over access to the land and the size of the land. Over time, notably between the 1930s and 1950s, the colonial government stopped awarding water abstraction permits because the water levels in the lake had dropped.

Wanjala noted that land around the lake was subdivided like a pie, the ground constricted towards the lake and the owners of such parcels of land would be unable to utilize them when the water levels rose high. When this happened, they would frequently intrude on their neighbours’ land, resulting in disputes that the LNRA would settle. The fiercest conflict that the colonialists faced took place during the Mau

⁸⁶ Oral interview, Silas Wanjala, LNRA Office, Naivasha, 18th February 2021

⁸⁷ Ibid

Mau rebellion in the early 1950s that was fueled by the Kikuyu due to land scarcity. This conflict was, however, prevented from turning violent by the colonial government who forcibly removed the dissenting farmers from the white ranches.⁸⁸

Kuiper and Greiner also make mention of land ownership problems, noting that after independence, ranches owned by British settlers were divided and sold to African-led cooperatives. As has been witnessed in other regions of the Rift Valley, these land-buying Africans of a particular ethnic group ended up owning the land. In this way, they set the stage for conflicts arising from what was perceived as unfair land allocation, the history of which can be traced back to the land tenure system.⁸⁹

2.1.2 Conflicts between Pastoralists and Farmers

The other dominant issue that resulted in conflict at the time was pastoralism vis-à-vis agriculture, which was mostly experienced between Maasai pastoralists and Kikuyu farmers in Naivasha. As Obioha has observed, in North-Eastern Nigeria, conflicts, sometimes violent ones, have occurred between pastoralists and farmers because each group is interested in maximizing pasture and water but for different reasons. The following scenario played out in Naivasha as observed by an informant.

Prior to all these, since horticulture and floriculture just began to develop in the early 1980s. So before then we had Maasai around and they are known for being pastoralists so we had communal conflicts between the Maasai and the Kikuyu because most of the Kikuyu are farmers while the Maasai are pastoralists so usually how they move is that they leave the land and then people come and cultivate on their land, of course not legal because they do not have the titles. So, when they come back with their cattle and they find people cultivating their land, there has to be some fight and this is notable

⁸⁸ Kuiper, "Naivasha's History: From Livestock to Flowers,"

⁸⁹ Kuiper and Greiner, "Export horticulture and labour migration in Kenya," p.3

especially if you look at the history of Naivasha in the area known as Ndabibi, That area used to have a lot of clashes between the Kikuyu and the Maasai.⁹⁰

Scholars note that conflicts between the Maasai and Kikuyu in Rift Valley, were almost always politically instigated, and ethnicism was used to fuel the conflict between the two groups. However, Oyugi points out that ethnicism by itself is not a source of conflict; situations characterized by inequitable structures of access add fuel to this fire resulting in conflicts. According to Oyugi, the fair market value resulted in several, largely Kikuyu-affiliated land companies, acquiring significant large tracks of land amidst mounting resistance from the Rift Valley's indigenous ethnic group's resistance.⁹¹ These companies were formed thanks largely to the political and economic clout that was made available to them during the Kenyatta regime.

In the Rift Valley, there were several ethnically motivated clashes, most of which were directed against the Kikuyu, Luo, and Luhya farmers who had moved to the area in the 1960s.⁹² It was against this backdrop that the conflicts in Ndabibi as relayed to this researcher also flourished. While the majority of these clashes between Maasai and Kikuyu concerned land, water issues would unavoidably arise because their two principal economic models, pastoralism and agriculture rely on water to be successful.

2.1.3 Human – Wildlife Conflicts

Conflicts between humans and wildlife were also reported according to some of the respondents interviewed for this study. The human-wildlife conflict was especially

⁹⁰ Oral zoom interview, Samuel Okuku, 11th March 2021

⁹¹ Walter O. Oyugi, "Politicized Ethnic Conflict in Kenya: a Periodic Phenomenon," (2000), p.7

⁹² Scott Matter, "We have this land as our right": ethnicity, politics and land rights conflict at Enosupukia, Kenya", Unpublished Master's Thesis, McGill University, (2004), p.8

serious since the Maasai traditionally value their cattle and considered anything that come between them and the cattle to be fair game. Okuku described how the frequent clashes between the Maasai and the wildlife resulted in many deaths, of both men and animal.

The human-wildlife conflict was also rife during that time because this area was not highly populated, there were large chunks of land set aside for conservation and when these guys would go to water their animals in the lake, they would meet these animals.⁹³

Traditional Maasai pastoralists rely on cattle for both milk and meat, along with sheep and goats. Each pastoral producer manages his home's resources at the household level to cater for his family's needs and ensure its survival during times of drought. Thus, the family's livestock serves as the foundation for both its material and social well-being.⁹⁴

The wildlife posed a threat to this significant aspect of the Maasai lifestyle and it was thus not surprising that conflicts dominated the relations between man and wildlife. According to the International Union for Conservation of Nature (IUCN), conflicts emerge when wildlife needs collide with those of the human population, resulting to a breakdown in interpersonal relationships and negative ramifications on people/or animals.⁹⁵

For purposes of this study, the researcher was only able to access documented cases of human-wildlife conflicts in Naivasha post the establishment of the flower farms.

⁹³ Oral zoom interview, Samuel Okuku, 11th March 2021

⁹⁴ Valerio De Biase, "Bio-cultural perspectives on Human-Wildlife conflicts: exploring socio-cultural aspects of the human-wildlife relationships of the Maasai people, an ethnic group of Central-East Africa, through traditional folktales", *University of Padua*, (2016/2017)

⁹⁵ International Union for Conservation of Nature, Issues Brief, June 2022
https://www.iucn.org/sites/default/files/2022-06/iucn-issues-brief-human-wildlife-conflict_final.pdf

These cases are attributed to the rapid population increase that was prompted by the influx of people seeking employment and the influx of various business people who came to Naivasha to cater to the varied needs of the people such as housing, social amenities among others at the time.

Scholars observe that the conflicts that typically arose at that time was due to the competing land usage as a consequence of the struggles for space, crops getting destroyed by the wildlife and the humans and livestock being prone to danger⁹⁶. Ogutu et al further note that between 1969 and 1999, the population of Nakuru County and by extension, that of Naivasha expanded by more than 300 per cent, a phenomenon that resulted in increased conflicts between humans and wildlife.⁹⁷ The wildlife are constantly facing harassment from people, dogs, lighting, and vehicles among other things while unlicensed hunting, trapping and killing of animals is on the increase.⁹⁸

2.1.4 Conflicts over Access to Lake Naivasha Waters

Access to the lake was also a source of contention during the colonial period, when cattle ranching and vegetable farming on small parcels of land were the most common activities among the population. However, as one respondent pointed out, this was only to a limited extent:

These issues were there even then because even before the flower farms came, these farms belonged to people, they were owned by private

⁹⁶ Joseph Ogutu, Bernard Kuloba et al, “Wildlife Population Dynamics in Human-Dominated Landscapes under Community-Based Conservation: The Example of Nakuru Wildlife Conservancy, Kenya.” *PLoS ONE* Vol. 12, No. 1, (2017): e0169730. doi:10.1371/journal.pone.0169730

⁹⁷Ibid

⁹⁸ Ibid

individuals so this issue has always been there but it was not as serious as it is now that the flower farms are established around the lake.⁹⁹

The chair of LNRA acknowledges that access to the lake was problematic even with the few wealthy landowners and the public at the time because there were public access points that were defined but were not adhered to by the land owners who considered them an intrusion of their private spaces.¹⁰⁰

2.2 CONCLUSION

The conflicts that occurred in the Malewa River Basin were not primarily motivated by water, according to the discussions in this chapter. Irrigated agriculture had not yet gained popularity, thus the Europeans residing in Naivasha during this time did not make great use of the water. A significant amount of the land in Naivasha during the colonial period was primarily dedicated to ranching, and it was the ranchers that disagreed over lake access locations once major areas of the land was privatized, resulting in complaints about trespassing. They paid little attention to the government designated access points for public use thereby causing conflicts. The problem of land size and access to such lands were also continual sources of contention as ranchers clashed over them.

The reported conflicts were largely political in nature, pitting the Naivasha communities against one another. While some respondents mentioned the occurrence of human-wildlife conflicts, there were no concrete examples to back this up. The

⁹⁹ Oral interview, Enock Kiminta, Lanab WRUA, Naivasha, 13th July 2021

¹⁰⁰ Oral interview, Silas Wanjala, LNRA office, Naivasha, 18th February, 2021

majority of responders discussed current disputes, giving the example of hippos that routinely venture out to land and are slaughtered for their meat by inhabitants.

CHAPTER THREE

WATER-RELATED CONFLICTS IN THE ERA OF FLOWER FARMING AND AQUA CULTURE

3.0 INTRODUCTION

This chapter discusses the types of conflicts that residents of the Malewa River basin faced with the introduction of horticulture and fish farming.

Large scale cut flower production in Naivasha began in the 1980s when a vegetable grower opted to switch sides ushering in a thriving horticultural industry focused on flowers around the lake.¹⁰¹ According to the Kenya News website, Oserian Farm was the first to enter the flower farm business, debuting in 1969 as a vegetable farm before evolving into the largest cut-flower producer in 1982.¹⁰²

However, at the time of this study, Oserian Farm had closed shop and was in the process of changing hands after the previous owners fell into financial difficulties, as was reported to this researcher by the farm's neighbours who were respondents in this study. Further information in the *Business Daily* reveals that Oserian Farm was bought by Bohemian Flowers Limited after the Competition Authority of Kenya (CAK) approved the deal.¹⁰³ Since that first farm, the number of flower farms in Naivasha has risen to about 70, with both large- and small-scale farms that has pulled in large

¹⁰¹ Robert Becht, "Environmental Effects of the Floricultural Industry on the Lake Naivasha Basin," *International Institute for Geo-Information Science and Earth Observation*, (2007), p.5

¹⁰²<https://kenyanews.co.ke/flower-farming-in-naivasha-kenya/#:~:text=Flower%20farms%20in%20Naivasha,flower%20producers%20in%20the%20country>

Accessed on 2nd March 2022 at 11.18am

¹⁰³ Patrick Alushula, "CAK approves buyout of flower firm Oserian," *Business Daily*, October 12, 2021

numbers of mostly untrained people to work in the farms due to the labour-intensive nature of cut flower production.¹⁰⁴

Cut flower farming gained prominence because it requires less area to cultivate than vegetable farming. Additionally, workers in the flower farms enjoy some job security as a result of the shift to permanent labour contracts, which resulted from the pressure to keep up with global trends and attract more workers.¹⁰⁵ As a result, most job seekers prefer to work in the flower farms since they are guaranteed a semblance of permanence and the opportunity to advance socio-economically.

This also implies that labour for flower farms is readily available because most job seekers want to work for flower farms, which is another reason why flower farming is a popular choice for many entrepreneurs. In addition, the businessmen saw Naivasha as a viable commercial location because of its proximity to Nairobi's airports. The flowers grown are mainly for export and must be flown out as soon as possible. This rapid growth of flower farming resulted in large scale abstractions of the lake waters, and it was therefore no more business-as-usual for the long-standing residents of Naivasha, because with the horticultural developments came an influx of people. According to Loukes the floriculture industry employs 25,000 workers, while the southern shoreline where most of the farms are located is home to up to 50,000 people. These settlements lack piped water and proper sanitation facilities.¹⁰⁶

¹⁰⁴ Gerda Kuiper and Clemens Greiner, *Export horticulture and labour migration in Kenya*, p.3

¹⁰⁵ *Ibid*, p. 5

¹⁰⁶ Keira Loukes, "Kenya's Cut-Flowers: An Unsustainable Industry on Lake Naivasha," PhD dissertation, 2008.

Aquaculture emerged in the early 1900s and was mostly a preserve of the white settlers. Their primary focus was fishing as a sport, with the colonial government placing value on fisheries that piqued their interest, such as Beche-de-mer, Ambergris, and Pearls, among others. Later, the trout was introduced in the rivers around Mt. Kenya but the indigenous populations were prevented from harvesting it due to racial segregation regulations which were in force at the time.¹⁰⁷ Commercial fishing was never an option for the locals until the early 1960s, when their attention was piqued significantly, prompting the Game Department, which housed the Division of Fisheries at the time, to broaden the department's mandate to include fresh water fishing, marine fisheries, and subsistence fish farming. A new fishing sub-sector was born in this way.¹⁰⁸

Since then, fisheries has received major government attention and has undergone multiple transformations, with various regulations enacted to accommodate the sector's rapid developments. Aquaculture rose to prominence not only as a contributor to food security but also as a means of alleviating poverty and creating job opportunities. Thus the government implemented plans to construct a number of small fish ponds across the country, a move that saw Tilapia farming grow exponentially, particularly in the Western and Central provinces. However, this expansion slowed down in later years due to several reasons, most notably due to the sizes of the ponds, poor quality of fingerlings and lack of trained workers.¹⁰⁹

¹⁰⁷ National Oceans and Fisheries Policy, Ministry of Fisheries Development, Government of Kenya, 2008

¹⁰⁸ Ibid

¹⁰⁹ Mwatsuma Mwamuye, Bernard Cherutich and Henry Nyamu, "Performance of Commercial Aquaculture under the Economic Stimulus Program in Kenya," *International Journal of Business and Commerce*, Vol. 2, No. 3, (November 2012), pp.2-3

In Naivasha, aquaculture gained a significant boost in 2009 when the government, through the Economic Stimulus Programme (ESP), financed the construction of fish ponds in an effort to offset the damages caused by the 2008 global financial crisis.¹¹⁰

The 2013-2017 CIDP was prepared following the establishment of devolved governments in Kenya; as a result, it was the document that captured the strategies that the County Government had implemented to address development issues post the 2009 drought.

However, according to a respondent interviewed for this study, while Naivasha residents embraced the new development enthusiastically, the fish ponds constructed mainly in the Upper basin soon became a source of pain rather than joy:

Most of the ponds became overgrown with algae because they were uneconomical to maintain. They were also attracting a lot of mosquitoes. The farmers also dug big ponds and they had to abstract a lot of water from the river which brought another issue of conflicts with the people downstream. I think this is because we were never trained properly on how to handle them.¹¹¹

Despite this rough start to the fish farming endeavours, the locals gradually adjusted, and today, as this study discovered, a number of fish ponds can be seen throughout Malewa Basin with a greater concentration in the Upper section of the catchment.

According to the 2013-2017 Nakuru County Integrated Development Plan, one of the main sources of income for the residents is fishing in Lake Naivasha. With the assistance of state department with connections from other stakeholders, fish breeding is also widely conducted in fish ponds and dams privately owned by individuals and

¹¹⁰ Nakuru County Integrated Development Plan, 2013-2017

¹¹¹ Oral Interview, John Ngotho, Upper Malewa WRUA Chairman, Ol Kalou 24th November 2022

registered groups.¹¹² This indicates a thriving and significant livelihood for this region, as noted by one respondent:

Fishing is a key economy for this county and also for the country because it provides food, it provides employment, there are so many groups of people that benefit from this activity, traders, transporters including those in Gikomba and Mombasa markets and so while the lake may look small nationally, it has a very expansive effect. Naivasha is also the lake that however much there has been negative publicity from it, the country still benefits. Previously, before devolution, we used to get a lot of tilapia from Lake Victoria but when devolution came, the other lakes took long to come up with structures, Lake Naivasha deals with a very restricted, controlled system where the issues of licenses are handled by the county government and by virtue of that, there has been a consistent supply of Tilapia unlike from the other lakes. Over the years, it has become almost the major supplier of Tilapia in the external markets.¹¹³

Given the vibrant positive outlook of these two livelihood projects, their reliance on water availability in order to thrive, as well as the factors influencing their growth as previously discussed, some push and pull was bound to emerge among the players within the Malewa River Basin. A number of conflicts have arisen following the advent of these two livelihoods as is discussed herein:

3.1 Conflicts between entrepreneurs (flower farms and hotels) and Environmental entities

Naivasha is a popular tourist destination, with several hotels and a plethora of recreational facilities. This is because the lake is scenic and provides a shoreline conducive to such enterprises. The freshwater lake also helps to attract investment in the flower and fish industries.

¹¹² Nakuru County Integrated Development Plan, 2013-2017

¹¹³ Oral interview, Nicholas Murimi, Kenya Fisheries Department, Naivasha, 15th July 2021

While it is undeniable that these hotels and flower farms provide much-needed employment to the community, as well as significant foreign exchange earnings for the country, it is also true that these ventures have been a source of many a conflict in the area, as was attested to by the various informants that were interviewed for the study. According to one source:

Before these flower farms came here, people were entirely going to the urban areas to get employment but now we have many people employed which is a good thing. But they have also caused havoc in the sense that the diesel that the farms use sometimes causes pollution because the leftovers are taken inside the water and sometimes even the containers carrying the dangerous chemicals are dropped into the rivers and this is the same water we use for domestic needs.¹¹⁴

Lower Malewa WRUA members complained of hostility from one of the flower farms, which does not recognize their role as a WRUA in environmental conservation. This flower farm has been in operation in the area for over 15 years, but has resisted all efforts by the WRUA to register as a member. The Water Act 2002, which has since been reviewed and is now the Water Act 2016, gives WRUAs the authority to manage the water resource by ensuring correct water usage, conserving the riparian areas as well as the overall watershed and settling disputes. The WRUA is made up of community-based water users who voluntarily join forces to do so.

They do not even recognize our work as WRUA members, they have even refused to enrol themselves as members and are only interested in the water for their own use, and they do not think it is for the benefit of others.¹¹⁵

Apart from conflicts that have arisen as a result of the proliferation of these farms, an informant observed that there are other negative aspects of their existence that may

¹¹⁴ Focused Group Discussion, Lower Malewa WRUA, Gilgil, 20th February 2021

¹¹⁵ Ibid

not be viewed as conflicts but have had a negative impact on the town and the community as a whole.

The population in this town has grown, exponentially I might add. That means that issues of pollution and lack of proper sanitation are on the rise and as a company, we have had to be extra vigilant. We have put in places measures to ensure that the water we provide to our customers meets all the safety standards. But there is need of expansion to accommodate the growing numbers.¹¹⁶

According to Muthoni, a desk officer at Lanab WRUA, a casual appearance of Naivasha may give the impression that the residents are at ease and have no water problems but this is not the case.

Yes, the lake is there but with growing demand and seeing that water cuts across all sectors and with the intense migrations that we have here of people coming to look for employment, you find that the water demand far outweighs supply. Sometimes we work with communities upstream and you can hear them complain, “oh, you people you tell us to conserve water, all the water is coming down to the lake and it is being used by the flower farms and the hotels, what are we getting back?” So, you see, unless you create an interconnection between the upstream farmers and the downstream businesses, conflicts usually arise, especially during dry seasons when we have water rationing, especially around River Malewa because that is where much of the water to the lake comes from.¹¹⁷

According to Muthoni’s assessment, a power struggle exists between water users upstream and downstream but not in the way that Wolf describes when he observes that most of the time, the downstream users bear the brunt of being disadvantaged by the activities of users upstream.¹¹⁸ In this case as pointed out by Muthoni, the upstream users feel cheated because the water originates from them, they participate in

¹¹⁶ Oral interview, Maurice Kinyanjui, Naivasha Water and Sanitation Company, Naivasha, 23rd February 2021

¹¹⁷ Oral interview, Susan Muthoni, Lanab WRUA, Naivasha 18th February 2021

¹¹⁸ Wolf, “Conflict and Cooperation along International Waterways,” p.

conservation initiatives to ensure steady flow, while the benefits are reaped by the downstream firms.

This, however, contradicts the observations of a NEMA official in the region, who stated that the instances of competition over water with which she has come into contact were due to complaints from downstream users who believe that upstream users are using up all the water in their activities and they are getting little to no water.

In the Malewa River Basin, it seems that the river's downstream and upstream users both feel cheated, albeit in different ways. While downstream users believe they do not receive enough water as a result of upstream users' activities, upstream users believe that downstream users should not benefit from their conservation efforts. Water pollution is also a source of conflict between the community members in Naivasha and the business owners, particularly the flower farm owners and hoteliers. While these water pollution cases may not be directly attributable to flower farmers, it is worth noting that they have resulted in conflicts, as this study found out.

The issue that we cannot evade is the change in water quality in the lake. The public regularly complains to our office. You find that most of these flower farms are just along the lake and they discharge their effluent, but of course, after treatment, into the lake so you find that some of them discharge more fertilizers into the lake which leads to the growth of hyacinth. If you even go to some of the flower farms, the places where they discharge effluent, you will find the vegetation around is quite green, an indicator of fertilizers and that has the effect of the low levels of oxygen because the hyacinth requires time to decompose, using a lot of oxygen and in the process suffocating fish and other aquatic life. So that is one of the problems we find on some flower farms and not only flower farms but even the hotels around the lake.¹¹⁹

¹¹⁹ Oral interview, Beatrice Mwangi, WRA Office, Naivasha, 19th February 2021

Interestingly, the flower farms believe that the blame should not be totally placed at their door because members of the public are equally at fault for the pollution as noted by this respondent:

There is a big population of people moving from other areas to come and search for jobs here so water use has gone up, compared to those days when the flower farms had just started. The population was very low, I remember when I came in the year 2000, when I first stepped in Naivasha, there weren't that many people but due to the increase in floriculture activities and more hotels coming up, we have seen a tremendous increase in the number of people coming to work in Naivasha. Pollution of the water has increased, especially along River Malewa, you will find people doing all sorts of activities along the river, some are washing clothes, some people wash their motorcycles/bikes, there are animals coming to drink. In some parts, people dump waste, hampering the flow of the river.¹²⁰

Warua of NEMA concurs, adding that pollution is a serious issue that the agency is dealing with because it has become rampant owing to the increase in population in the area. She notes:

You see, we do not only have the farms polluting the resource, but we also have people taking the water for use and they also generate waste water so how we handle the waste water, that is one issue that we are very keen on. Whether it is the hotels or the flower farms, whether it is the sewerage company in Naivasha, how they are releasing their waste water into the lake because the farms are using chemicals and as much as we are monitoring them, once in a while you will find pollution in the water bodies.¹²¹

Mireri notes that a significant portion of Naivasha's residents are still not supported by the traditional sewerage systems, as evidenced by the issue of inadequate waste management. The disposed waste from the small area which is supported is a potential cause of pollution.¹²²

¹²⁰ Oral Interview, Simon Colly, Panda Flowers Farm, Naivasha, 13th July 2021

¹²¹ Oral zoom interview, Sarah Warua, NEMA, 27th July 2021

¹²² Caleb Mireri, Challenges Facing the Conservation of Lake Naivasha, Kenya, *AquaDocs*, (2005), <https://aquadocs.org/handle/1834/7303>

The farming activities of the people upstream of the Malewa River also lead to pollution, especially during rainy seasons because the flowing water carries sediment loads that are deposited in the lake.

You see, all the waters that are coming to the lake originate from the Aberdares and with time, due to increase in population, there is demand for fuel so people are cutting trees, there is also demand for food so people have gone and cultivated in the upper catchments so when it rains you find that our rivers become highly turbid because of the soils that are carried along the way due to soil erosion so our waters are not clear because there is high catchment degradation.¹²³

Pollution has also been experienced as a result of a flower farm dumping waste into Malewa River, which the Middle Malewa WRUA members were hesitant to name, preferring to simply say that it was an issue they had dealt with.

There was a time that we received complaints from the community members around here that the flower farm was making the water dirty by throwing garbage inside. As the WRUA officials, we went and had a talk with the owner and they changed and made another dumping ground away from the river.¹²⁴

In addition, Middle Malewa WRUA has also undertaken discussions with some flower farms in the Kabati area, whose actions they believe are interfering with the quality of the river water. The water turned red at some point due to the chemicals used by the flower farms, and they insisted that the flower farms construct wetlands within their farms so that by the time the wastewater is released back into the river, it will be clean. They admit that handling the flower farms is a challenging assignment; the gates have been slammed in their faces many times, and the owners or managers

¹²³ Oral interview, Beatrice Mwangi, WRA Office, Naivasha, 19th February 2021

¹²⁴ Focused Group Discussion, Middle Malewa WRUA, Kapten, 27th February 2021

refuse to see them; however, they persevere and invent ways to get their message over to them.

We go through the back door when this happens. There was a time we went with a WRA officer but they still insisted that we could not enter. They even called the police on us who came and told us to leave because the watchman did not have the keys to the gate. But you know these farms, most of them have gates at the front but at the back, it is just shrubs and small forests leading to the river but no strong fences because they don't think anyone would enter through there. So, we went and took pictures of the river and saw how they had made the water dirty and then we went back to the main gate and showed the watchman the pictures and threatened that we were going to take the pictures to the media and made as if we were leaving. He called the boss immediately who invited us in and we were able to talk and tell him what we wanted him to do. Just take care of the environment.¹²⁵

Members of the Middle Malewa WRUA have also had to deal with water scarcity downstream as a result of activities of flower farms upstream. In this instance, they mentioned Tilly and Highlands farms, which they claimed abstract water from Nyairoko River, a tributary of Malewa River. The Secretary observed:

We have held community meetings several times and at one point the chairman and myself went to the farms and agreed with them that on particular days, they will not abstract water from the river so that there can be flow downstream for the users there. So yes we have had such kinds of conflicts but we were able to resolve them.¹²⁶

The WRA office in Naivasha routinely receives complaints from members of the public who believe that their needs as small-scale irrigators are not being met and that preference is given to the flower farmers and other large-scale irrigators such as Delamere Farm.

Due to the water demand, you find that some of the locals complain. They see as if the flower farmers or the commercial irrigators are being favored. I remember there is somebody sometime back, one of the stakeholders who

¹²⁵ Focused Group Discussion, Middle Malewa WRUA, Kapten, 27th February 2021

¹²⁶ Ibid.

wrote to us and wanted to know the actual volume of water that a specific abstractor had been allocated because according to them, that particular institution had more than 60 boreholes and the other person had maybe just two and for him this was favouritism.¹²⁷

Mwangi observes that most of the community complaints arise from the belief that they own the water because it runs through their land and that the government has no right to regulate or even prevent them from accessing it as they see fit.

According to a boat rider employed by the Sawela Lodge, when the flower farms were established, the waters of Lake Naivasha were fresh and there was plenty of fish, both for people and even for the birds and animals that feed on fish. Yet, after their arrival, the situation changed because;

You see these papyrus reeds; these you can see here. Previously, they used to be all over the lake shores and they used to help keep the water clean and there were also lots of fish, but since these farms came, they no longer grow as much as they used to. I don't know if there is a connection but it is something I have noticed.¹²⁸

Njuguna has been in the boat riding business for over twenty years. He was initially employed at the South Coast in Diani where he plied his trade for over ten years. He moved to Naivasha in 2010. He observes that when at work, he has to be on the lookout for the illegal fishermen who somehow find their way to areas of the lake where they are not allowed. Access to the lake by the community around Naivasha remains a contentious subject between the community and the landowners around the lake and has been a source of conflict in the past

In theory, we talk of 17 corridors but when you go to the Ministry of Lands to trace these historical maps to see how the land around the lake was subdivided to try and find out if there were some routes that surveyors left, you cannot

¹²⁷ Oral interview, Beatrice Mwangi, WRA Office, Naivasha, 19th February 2021

¹²⁸ Oral interview, Daniel Njuguna, boat rider at Sawela Lodge, 15th July 2021

find any. But the communities know that this was supposed to be a corridor but a flower farmer has utilized it so what do you do? When you go to sue these flower farmers, they have the documentation and titles from the government of Kenya. So, the issue of corridors for me can never be resolved until the Ministry of Lands comes to the ground, the surveyors come to the ground and mark these areas for opening afresh. If that is not possible, then the National Land Commission should come down and acquire some pieces of land to build these public access corridors. We have written petitions and informed the relevant authorities so they will not say that we never did anything, so many letters and petitions, cases are in court. This thing is a time bomb.¹²⁹

According to Kiminta, most of the public access areas have been encroached upon and restricted by the private developers even before the flower farming and hotel industry flourished, while others belonged to private individuals who have no wish to open their property to the public.,

Individuals have no access to the lake be it for leisure, for laundry and some even depend on it for domestic use such as cooking and that has been a source of recurring conflict every other year whenever there is a dry spell. And then also the issue of over-abstraction and I will not tie that to the lake itself but to the rivers that feed into the main river Malewa whereby local communities who are farmers are abstracting lots and lots of water thereby reducing the flows of the rivers and by extension Malewa which flows into the lake.¹³⁰

Wanjala agrees with Kiminta on the need for public access routes observing that it has been a heated topic that has not been well handled. He observes that the public believes that the government is deliberately denying them access to the lake, therefore their answer is to try to force their way in by illegally taking access points and holding demonstrations to agitate for their rights, a solution which he disagrees with. He opines:

We need to have a permanent solution; we need to identify these key access points for the public that have been marked in the survey plans. But every time we sit with the government and the community and the stakeholders' task of

¹²⁹ Oral interview, Enock Kiminta, Lanab WRUA, Naivasha, 13th July 2021

¹³⁰ Ibid

the committee is to go to the surveyors of Kenya and bring authentic survey plans, nothing is done so we don't know where the problem is.¹³¹

The main challenge for the Lower Malewa WRUA is that the flower farmers do not value the efforts of WRUA members and consider them a nuisance. Due to this disregard, they fear that resolving the problem of public access to the farms will be difficult. Lower Malewa WRUA members have been involved in multiple altercations with flower farmers who regard the former a nuisance. When the WRUA officials went to seek audience with the management of a particular farm, they were chased away. They had received complaints from community members who claimed that the farm was dumping chemical containers into River Turasha, a tributary of Malewa River, causing pollution, a fact they were able to confirm after visiting that section of the river.

On a separate occasion, they went to the farm to express their concerns about the lack of toilets for the workers, after some workers were seen relieving themselves in the surrounding bushes, but their efforts were not successful. They expressed their concerns to WRA and WWF, believing that these organisations had more power and authority to act against the offending farm. Since then, the WRUA members have been experiencing strained relations between the farm and the community members. Lower Malewa WRUA's sentiments suggest that more must be done to consolidate their position as water and catchment conservation champions.

WRUAs are regarded as one of the most useful avenues through which conflicts over natural resources can be solved at the grassroots level. Indeed, as this study found out, WRUAs have been instrumental in resolving conflicts and maintaining peace among

¹³¹ Oral interview, Silas Wanjala, LNRA office, Naivasha, 18th February 2021

community members and entrepreneurs, as was observed by Middle Malewa WRUA in Ol Kalou during the discussions.

However, all key stakeholders must intensify their right to knowledge and insist on broader public participation in order to empower the WRUAs and enable them to carry out their obligations efficiently. Instances of mistreatment and contempt for their efforts should be avoided because they play a key part in overall watershed conservation and ecological well-being, which ultimately results in peaceful relations.

3.1.1. Conflicts between hotel owners and fishermen

Hotel owners have also clashed with the illegal fishermen in Lake Naivasha, accusing them of trespassing in their efforts to catch fish. This is because the fishermen wreak havoc on the riparian reserves around the lake by felling trees to sell whenever they are unable to catch any fish. Additionally, the illegal fishermen pose a security threat to the lodge owners because they occasionally steal their boats as was pointed out:

We cannot leave our boats out there nowadays; they will take the boats and go use them to do their jobs so now we have had to make hand-driven carts to drag our boats inside the hotel compound every evening and that is extra work for us. Another thing, before polythene bags were banned, they would bring them to the lake and dispose them there and this would pollute the lake. Sometimes they also leave their old nets scattered around and these nets do not decompose that fast and they mess up the environment.¹³²

According to Murimi, the government has been concerned about fish poaching since before Naivasha became an economic hub. This is because the number of individuals who need to catch fish has always been larger than the amount of accessible fish and the licenses, which is why fishing prohibitions were created. However, as Naivasha's population has grown, the problem has become more serious.

¹³² Oral interview, Simon Karanja Ngugi, Lake Naivasha Sawela Lodge, 15th July 2021

When such conflicts occur, they draw in other players and stakeholders. One such player is the Kenya Marine and Fisheries Institute whose official I spoke to:

We get drawn into these conflicts even though it is not within our mandate to deal with them. As you know, most of the hotels and farms around here are around and along the lake, so every other time you will hear of a conflict. Sometimes the fishermen want access to the lake through the farms or hotels and of course, the farms do not want intruders so you may find there are exchanges taking place. There are constant fights and also even among the fishermen themselves there is usually conflict because you find that there are issues of theft of engines, boats, nets etc., You find that fishing in this area is regulated, it is not open so you have to be licensed and of course, there are people who are not licensed so you find that some feel that they are entitled to this place just like the next person. There is no space for everybody so the struggle is for the water and everybody wants access to it for their livelihood.¹³³

Wanjala, the LNRA chairman admits that his organization deals a lot with conflicts between the fishing community and landowners whom he declined to name, particularly among unlicensed fishermen who ply their trade on the shores of the lake on the riparian land rather than fishing inside the lake. He notes:

Fishing from the edge of the lake inwards at a distance of about 100 meters is prohibited so all licensed fishing happens inside the lake except on the licensed beaches and the fish landing sites where the licensed fishermen launch and land their vessels. We have had conflicts between the illegal fishermen and the landowners and apart from these guys engaging in illegal fishing, they also engage in another manner of security-related issues. If they find your vessel, they can easily go with the mortar, if they encounter an antelope, they turn it into meat so apart from being an illegal fishing group, and they also pose a security challenge around the lake so that is one of the ever-increasing issues.¹³⁴

There have been some attacks on land owners and destruction of property in the past as a result of these back-and-forth conflicts. The LNRA official acknowledged that

¹³³ Oral interview, Alice Mutie, KEMFRI offices, Naivasha, 13th July 2021

¹³⁴ Oral interview, Silas Wanjala, LNRA Office, Naivasha, 18th February 2021

his organization had tried to stop the violence but he was reluctant to go into detail about who was responsible for these attacks, citing the privacy of their members.

We have had some property being vandalized, we have had some landowners being threatened, mainly death threats being issued to them because they have been trying to tell these guys, no, you cannot fish in this area and we have raised those issues with the security committee, some arrests have been made but still, it is a protracted conflict so it is always on and off but I cannot give names because of our members' privacy.¹³⁵

During the interview at Sawela Lodge, the researcher was taken around the premises and shown the docking area where the boats are moored while waiting for guests. Men who appeared to be waiting to make a catch were spotted in the waters close to the hotel. Ngugi informed the researcher that those were illegal fishermen.

3.1.2 Conflicts between Government Agencies and members of the community

As this study discovered, conflicts between government bodies and members of the community have been common in the Malewa basin area. A case in point was during the 2009 drought, when an employee of WRA, the agency mandated with water resources regulation in the country faced the wrath of the community. The officer who happened to be on duty to inspect the canals dug by the flower farms was attacked and injured by some members of the community who were protesting against what they termed as unfair treatment by a flower farm. Kiminta elaborates:

One of the pastoralists had lost a child who had fallen inside the canal and drowned so when the WRA officer tried to go and do the normal monitoring, whether the canal was to blame or not, because of the high tempers from the loss of the child and the distressing situation of lack of water, the community members got angry and attacked him. Several arrests were made at that time just because everybody was trying to access the little water that was available in the lake.¹³⁶

¹³⁵ Oral interview, Silas Wanjala, LNRA Office, Naivasha, 18th February 2021

¹³⁶ Oral interview, Enock Kiminta, Lanab WRUA, Naivasha, 13th July 2021

The relationship between the community members and the agency became strained as a result of this incident. The flower farms were also chastised by the community for having dug the canals, which resulted in the death of not only a pastoralist's child but also wild animals that would routinely fall into the canals, straining the relationship between the flower farms and the Kenya Wildlife Service, the agency in charge of managing and conserving wildlife.

The fishermen have also had their fair share of conflicts with the Kenya Fisheries Department (KFD), which they believe is not handling their issues properly. Nicholas Murimi, the Sub-County Fisheries Officer in Naivasha at the KFD, has received several complaints from disgruntled fishermen who believe that the Department has treated them unfairly. Numerous times, these complaints have escalated into riots and demonstrations by the fishermen who regard the department as a stumbling block to their livelihood.

The basin is faced with a lot of challenges. I would want to talk about it as a socio-economic problem, there is lots of conflict in terms of resource utilization. Basically, the lake is controlled and therefore those left out always feel like this is a lucrative resource or opportunity that is only left to a few and so we end up with very serious conflicts and this is something that we are addressing currently. I would begin with the fisheries sector where we have fishing groups because the lake does not accommodate all of them, it only accommodates a few groups that are supposed to be licensed and not all can be licensed so there have been serious conflicts especially in the recent past. Some of them are even armed conflicts where they end up in riots. If you come to the department and you want to seek a fishing license, you will not be granted that license because we only license once a year and it is controlled and what that means is that all those other people who come to our office every day feel like why are they not being allowed to get it.¹³⁷

A visit to the KFD offices revealed a yard that was littered with fishing nets and boats. When this researcher inquired, she was informed that the boats had been taken away

¹³⁷ Oral interview, Nicholas Murimi, Kenya Fisheries Department Office, Naivasha, 15th July 2021

from fishermen who lacked licenses to fish within the lake. The person I spoke with declined to be quoted, preferring only to say that the department favours some fishermen over others because in his opinion, there was no need to grant permits only to a select few fishermen. However, Murimi refuted these claims, pointing out that issuance of permits was contingent upon certain standards being met by the fishermen and that those who did not meet them did not get the licenses. He adds that due to the frequency of these conflicts, the department has been keen to find a solution to the problem because;

...we felt that the conflicts were not only fish related, some conflicts have to do with corridors, people agitating for access, other conflicts are related to ownership of the riparian land in some sections, then we have the issue of the flower farms, people feeling that these farms are not contributing enough for their sustainability or what they are contributing is not felt by the community because again these are the people who benefit from the waters in the lake.¹³⁸

Residents of Kapten in the outskirts of Ol Kalou town where Middle Malewa WRUA is located, have also had to contend with lack of water because of government projects that they claim do not favour them. In his examination of structural scarcity, Homer-Dixon elucidated this phenomenon, observing that in such cases, the powerful or the elite in the society usually benefits from such government actions. In this case, however, it was not clear where the power balance lay. A WRUA member elaborates:

There is this river Malewa, there is a place along it where the water has been diverted to take water to Nakuru, there is the water from Sasimua which goes to Nairobi and yet it is from Nyandarua, there are other diversions currently being constructed that will take water to Laikipia. Here in Middle Malewa, we had many water projects during the era of President Moi but they have since then been taken down by Ol Kalou Water Company which is in charge of distributing water. Since we are in the middle, Upper Malewa people are at an

¹³⁸ Oral interview, Nicholas Murimi, Kenya Fisheries Department, Naivasha, 15th July 2021

advantage because the rivers are from there and they can tap. For us, if we are lucky, we get water maybe two or three times in a week.¹³⁹

The Middle Malewa WRUA members further revealed that there exists conflict between the community in Upper Malewa and the Ol Kalou water supply company. Upper Malewa WRUA controls the flow of the water from the source, therefore during drought, they restrict the flow of the water because they need it to irrigate, and there is often no flow of water downstream at all. When asked what they do in such instances, members said they have no say over what the WRUA does because each WRUA has its area of jurisdiction. The working relationships of the WRUAs is called into question by this position. It seems important that procedures should exist that allow them to “interfere” as necessary as long as doing so serves the interests of all parties.

Upper Malewa WRUA however, disagrees saying that the decreased flows were occasioned by Ol Kalou Water Company which was abstracting plenty of water from Malewa River, thus leaving the WRUA no choice but to restrict the flow of water.

The conflict we had with Ol Kalou Water Company was very bad, it was around that time we had drought, 2008 or 2009, I cannot remember exactly, They were over-abstracting, you know as a WRUA we have rules that govern how much water each user should abstract and especially during drought. We have to ensure that all who need water get it. But Ol Kalou was over-abstracting and they also wanted to interfere with how the affairs of the WRUA are conducted. They even wanted to take over conservation activities on the ground, we could not allow that. As the WRUA management committee, we informed WRA and a meeting was called where several stakeholders were present, including officials from the Ministry of Water and Irrigation as it was known then. Since then, we do not conflict as much.¹⁴⁰

¹³⁹ Focused Group Discussion, Middle Malewa WRUA, Kapten, 27th February 2021

¹⁴⁰ Ibid

Due to this situation, the Kapten community decided to build some dams to solve the water issue, with the help of certain local officials. To meet the community's water needs, a small dam called Mumbi was being constructed at the time of this study. It is a modest dam that will not serve the entire community, only those who live nearby, but there is hope that more dams will be built in future.

Dialogue was employed by Middle Malewa WRUA to settle their dispute with Ol Kalou Water Company. This conversation involved a number of significant stakeholders and a fair resolution for all parties was reached.

3.1.3 Conflicts between Government Agencies and Politicians

Politicians frequently turn to making populist claims or promises that they may not keep in order to win over voters and establish favour with communities. When this happens, in a bid to remove the spotlight from themselves, they provoke community members to cause chaos, as the WRA office in Naivasha has experienced.

A WRA officer recalled an occasion when a local MCA led a group of community members to storm the WRA office, demanding that they be permitted to sink a borehole in an area where the organization had advised against doing so since the water yield in the ground would not be enough to meet the demand.

He had funded the community to sink a borehole very close to another borehole whereby our advice after inspection according to the groundwater in the area, they could not do it but they still forced the drilling. The community and our office could not agree, the MCA and the Regional Manager came on board and it was sort of like a fight. Eventually, they were not authorized to sink that borehole but since there was another one that had been abandoned nearby, they were requested to drill it as a replacement. But you know we understand the aquifer and that area is very shallow and we told them depending on your water demand, the site is not favourable but because they have political influence and vested interests, we could not change their minds.

They went ahead and sunk that borehole but there was no water for the people and the people blamed us.¹⁴¹

Mwangi states that such occurrences are widespread, particularly during electioneering period, when politicians make all kinds of promises. At the end, WRA appears to be the adversary since, in the eyes of the community, the Authority is only interested in obstructing their access to water. But, as she explains, this is not the case:

You know, we understand the aquifer, and we can tell, depending on the demand for water, which site is favourable and which one is not favourable but because of political influence and vested interest, the community members think that we just want money unnecessarily.¹⁴²

Yet, she emphasizes that WRA work must continue, and in order to tackle such cases, they employ WRUAs to educate the community members on this and many other topics related with the proper use and protection of water resources. She acknowledges, however, that there have been obstacles in the way of this sensitization because most people do not comprehend why the government should have a say in what they choose to do on privately owned land.

3.1.4 Conflicts between WRUA members and the communities they serve

As mentioned at the beginning of this paper in the discussion on the types of conflicts that have occurred within the Malewa River Basin, there are frequent conflicts between community members, despite the presence of the lake. As such, the area is considered water-scarce. As this researcher was told, the conflicts vary and are more prevalent during the dry seasons.

¹⁴¹ Oral interview, Beatrice Mwangi, WRA office, Naivasha, 19th February 2021

¹⁴² Ibid

What you need to understand is that water conflicts around the Malewa Basin is a common occurrence, down here but mostly in the Upper Catchment. You see it is water abundant so they are not used to having water problems because everybody has their pipe coming from the river to their farms so when it is dry and there is not enough water running through the channel, they go upstream to get water and this results in serious fights, they even use pangas. Although during the 2009 drought, things were bad. The conflict was such that when the pastoralists brought their cattle to the lake and there was no water in the lake, they blamed the flower farmers, that they are abstracting too much water. Now, the flower farms as well had a problem because the pastoralists when they come and there is no water in the lake, they want to get into the farms. And then the downstream users who were relying on the lake were blaming the users in the upper catchment that they have consumed all the water so there was no water coming down to them so those are the kinds of conflicts that we were dealing with at that time.”¹⁴³

Complaints were common against community members in the Upper catchment who were accused of environmental degradation through cutting down of trees for burning charcoal and cultivating along riparian reserves which resulted in downstream users not getting enough water. Moreover, according to the Upper Malewa Sub-Catchment Management Plan, deforestation to develop settlements, burn charcoal and access building materials has caused massive soil erosion in the catchment, resulting in water deterioration. Community members also bring their animals to drink directly from the rivers and discharge farm waste into the water bodies. Since there is no more arable land as a result of population growth, many people are cultivating the riparian land to supplement their income.¹⁴⁴ Aside from damaging farming practises such as the use of excessive pesticides in the farms, the people were also growing plants on every accessible land, including riparian areas. Some were cutting trees on the grounds that it was their land after all.

¹⁴³ Oral interview, Jane Kioko, Imarisha Naivasha, Naivasha, 18th Feb 2021

¹⁴⁴ Water Resources Authority, Upper Malewa Water Resources Users Association, Sub Catchment Management Plan, 2013

Members of the WRUA have also experienced hostility from farmers in communities where they carry out conservation activities. Most conflicts arose because the farmers did not understand why the WRUA members prohibit them from planting crops along the riparian land and instead, chose to plant trees. The secretary of Lower Malewa WRUA explains:

The conflicts that we have noted a lot was when we would be planting indigenous trees along the river banks, the farmers did not even know that the riparian land was for government. So many times they would tell us not to plant trees and even chase us but we kept exerting ourselves and going back. As WRUA members, we educated them that the area belongs to government and we even had to alert the chiefs and the chiefs held barazas and so the many people who were against that they accepted and now whenever we have to plant trees along the river banks, we have no conflict.”¹⁴⁵

When questioned about the intensity of these disagreements, the WRUA members indicated that while there was currently no reason for worry, they were nonetheless concerned because their ability to properly carry out their work depends on the community’s goodwill. This calls into question the WRUAs purported authority, especially in light of the Water Act 2016’s legislative requirement of them as earlier noted. They don’t appear to be able to enforce any laws. This study also revealed that some WRUA members had conflicts of interest due to their strong ties to individuals within the communities they work with. They are unable to completely take a stand on issues.

This is both a good and bad thing as was demonstrated during the interaction I had with them. My interview session happened to coincide with a visit from Nakuru County officials who had been invited by the Lower Malewa WRUA chairperson for a consultative forum with members of the community. The village is experiencing water shortage and the WRUA members were able to collect signatures from the

¹⁴⁵ Focused Group Discussion, Lower Malewa WRUA, Gatundu Village, Gilgil, 20th Feb 2021

villagers to demonstrate their support for the construction of a borehole. The officials were coming to examine the paperwork and provide a way forward.

3.2 CONCLUSION

This chapter has demonstrated that the incidences of conflicts among the stakeholders in the Malewa River Basin increased following the growth of the flower farms. Conflicts between the community members are on the rise, with complaints about upstream users unconcerned about downstream users. The illegal fishermen are also a source of conflict as they constantly knock heads with hotel owners over the issue of access corridors to the lake as well as access to the waters of the lake. As a result of population increase, harmful farming practices have been promoted by individuals trying to make a living with no concern for the environment's well-being. The community-mandated environment champions, the WRUAs, also found themselves at odds with the same community members they are supposed to educate, as some regarded them as intruders whenever they pushed for sustainable farming practices that conserve water resources.

As has been previously mentioned, Naivasha is one of the country's main economic hubs and as such, it is paramount that the issues bedevilling its residents are given the attention necessary if the country is to continue enjoying the economic benefits it brings forth. In this chapter, the WRUAs were depicted as barking dogs with no teeth. This indicates a policy gap that the responsible parties should address if these bodies are to carry out their functions successfully.

CHAPTER FOUR

RESOLVING WATER RELATED CONFLICTS

4.0 INTRODUCTION

Scholars in the array of literature analysed for this study have emphasized an urgent need to address water-related conflicts and find lasting solutions to the phenomenon if wars over water are to be avoided. This is so because water is essential to life and is a critical resource in all sectors of the economy. Since the issues raised in the preceding chapter have potential to exacerbate the conflicts, there is need to reduce the escalation or potential for conflicts over this resource.

There are broad aspects around which countries can resolve or reduce the potential for conflict over water resources, including the creation of treaties or agreements such as the over 3600 that have been recorded by UN FAO, the encouragement of dialogue between the conflicting parties¹⁴⁶, as was recommended by Okidi for the Nile Basin riparian countries Ethiopia and Egypt who are currently embroiled in a bitter conflict over the former's construction of the GERD, or the enforcement of severe sanctions on offending parties. As observed in chapter two, the origins of conflict over this critical resource can be particular to a region, necessitating specialized initiatives to address them as there is no one-size-fits all solution.

¹⁴⁶ Okidi, "Nile Waters," p. 117

This chapter outlines the various mechanisms utilised by stakeholders within the Malewa River Basin in an attempt to minimise the water conflicts and find solutions to the water conflicts in the area. Most of the interventions discussed were hatched after the introduction of flower farms and aquaculture except for the LNRA which was established prior to the start of the new livelihoods but has remained relevant to the needs of the communities within the basin to date.

Notwithstanding the multiple links between water and conflict, as well as water management issues involving competing interests, most of the disputes are concluded amicably and even give rise to cooperative agreements for future access and utilization of the resource.¹⁴⁷

This phenomenon came to light during the study conducted at the Malewa River basin. Several respondents cited the 2009 drought as a defining moment that changed the way they interacted within the basin. While the drought exacerbated some of the issues within the basin, it also emphasised the need for the community to come together and explore cooperative methods to overcome the disagreements. Experts agree that “quantity, quality and timing” are the three key drivers of water-related conflicts, although the underlying causes differ depending on whether the conflict is local, national, or international.¹⁴⁸

The issues confronting Naivasha, particularly the Malewa River basin, are no different, and given Naivasha’s significance to Kenya’s economy, as well as the international attention that Lake Naivasha commands, a long-term solution to the conflicts is critical. Flower farming and aquaculture have undoubtedly exacerbated the challenges at hand, resulting in occasional conflicts. However, the stakeholders believe that these conflicts have a positive side to them, and

¹⁴⁷ Aaron T. Wolf, Annika Kramer, Alexander Carius et al, “Managing Water Conflict and Cooperation,” *The World Watch Institute, State of the World* report, (2005), p.91

¹⁴⁸ *Ibid.* p.81

the 2009 drought was regarded as a turning point because, as a result of the conflicts that arose, they were able to come together to seek a way out that was acceptable to all the parties. They are optimistic that they will eventually find a solution that will benefit all. An informant interviewed for this study observes: In terms of partnerships, I am very happy that we are working cooperatively well with most government agencies such as WRA, NEMA and KFS and other relevant agencies. Nothing is being done under the table. These issues are being thrashed every time we have a chance to talk and I know that eventually, we will be able to integrate all these needs well.¹⁴⁹

4.1. Efforts to reduce the potential for water-related conflicts within Malewa River Basin

There have been several attempts at resolving the water-related conflicts that have been experienced within the Malewa River Basin. As the study found out, many of these initiatives and resolutions have been community-driven with the aid of the various government bodies, NGOs and the varied array of stakeholders in the water sector in the region.

4.1.1 Lake Naivasha Riparian Association

The LNRA was formed in 1929 to address concerns that landowners in Naivasha were having at the time. Originally known as Lake Naivasha Riparian Owners Association (LNROA), the body's major goal was to prevent land and boundary conflicts between individuals who owned land next to the lake. LNRA is one of the nation's oldest organizations, formed primarily to settle disputes over lakefront land use.

According to the LNRA chairman, the most common disputes during this period were among landowners who complained about land invasion by their neighbours whenever the water levels in the lake increased, rendering their holdings unusable. The body would arbitrate on such cases.

¹⁴⁹ Oral interview, Enock Kiminta, Lanab WRUA, Naivasha, 13th July 2021

However, the researcher's efforts to obtain these arbitration records were futile because the respondent did not share them, citing the fact that apart from being archived, they are confidential. Even though the LNRA was initially formed to manage the lake, it was not until 1998, after changing its name to Lake Naivasha Riparian Association (LNRA) and introducing associate membership, that it acquired traction in its conservation activities.

The organisation established its presence by successfully fighting for and managing the designation of Lake Naivasha as a Ramsar site in collaboration with other stakeholders. Wetlands classified as Ramsar sites are valued globally for their biodiversity conservation. This designation was important for LNRA not just locally but globally, and thus all the stakeholders were bound to ensure proper utilization in conformity with the Ramsar Conventions because it brought to fore the Lake's significance worldwide.

The LNRA received the Ramsar Wetlands Conservation Award in 1999 for their conservation efforts in and around Lake Naivasha. Soon after the introduction of cut flower farming and the expansion in the number of hotels and lodges along the lake, efforts at sustainable development of the lake took centre stage. Almost overnight, the colonial-era organisation established itself as a one-stop-shop for networking, while becoming an important weapon for protecting the riparian zone owned by the government. One of the Ramsar conditions was that the lake be subject to a management plan that included all the stakeholders and water users equally.

We managed to put up several codes of conduct in the plan and it mainly targeted landowners and the codes of conduct were categorized into different sectoral conducts, one was for growers and another one was for hoteliers and the hospitality sector and then we also had another code for the fishing community. As a result of implementing that water resource conflict plan,

another conflict arose as some growers felt that we were against their investment and so implementation was suspended because they went to court.¹⁵⁰

According to the reviewed literature in this study, most water conflicts are peacefully resolved, and so even the disagreement within LNRA that led to the formation of the Lake Naivasha Growers Group (LNKG) ended amicably, with the involved parties agreeing to share the available resources to benefit each one of them, and now both groups are working together for the greater good, as Wanjala noted;

After that plan to put in place regulations for sharing the available water resources was disputed, we managed to have a broader, all-inclusive plan that leads to water scarcity awareness campaigns, the introduction of new conservation technologies, improve irrigation and agriculture water use, as well as community governance and partnerships.¹⁵¹

From discussion with informants, one major issue was that the large commercial growers believed that the larger riparian association was not serving their financial objectives thus the move to form a separate association. Considering this, later initiatives to minimise conflicts and tensions contemplated a different approach covering greater portions of Malewa Basin and the needs of the various stakeholders.

He adds that the initial management plan was solely focussed on the lake, but following consultations, a more integrated 10- year plan (2012-2022) was devised under the banner of Imarisha Naivasha. This new strategy considered the entire basin, with separate codes of conduct aimed at the various stakeholders i.e. the growers, hoteliers and the fishermen.

¹⁵⁰Oral Interview, Silas Wanjala, LNRA office, Naivasha, 18th February 2021

¹⁵¹ Ibid.

The management plans were designed to ensure that conflicts over the use of the lake's waters were minimized and that all users felt that their needs were met. This reaffirms the argument of many scholars that, while water causes conflicts, it ultimately leads to cooperation because the opposing users realize that they stand to benefit more as a unified force rather than a divided one. In terms of water resources and lake management issues, LNRA remains one of the region's most active participants to date.

Wanjala noted that a large part of their present work is advocating for the responsible use of the lake resources, which they do by collaborating with other like-minded stakeholders both locally and internationally. Furthermore, the organization takes pleasure in being the first port of call for students and researchers seeking information on Lake Naivasha. LNRA has positioned itself as a steward of the riparian zone and the ecological system of the lake. It has established internal rules for its members, such as a ban on riparian land cultivation and development, and it organizes research and educational events for the general public on a regular basis.

Despite these glowing accolades, some members of the community around Lake Naivasha regard LNRA with suspicion, believing that the organization is only concerned with the issues of the foreigners and the wealthy. A fact that they believe hinders them from carrying out their job objectively.

Those people at LNRA are only concerned with *wazungu* issues, when I used to work at the flower farms I don't think they ever did anything useful for us workers. They hold workshops and meetings but it is always fighting for the rights of the owners of these farms, where are common people like me?¹⁵²

¹⁵² Oral interview, John Nandwa, former flower farm employee, Naivasha, 17th February 2021

Wanjala says that these are “unfortunate” sentiments held by several people, including some government officials, but adds that they have no basis because LNRA’s members are the hotels, flower farms and all land owners whose property borders the lake, and it is only fitting that LNRA should champion their rights.

4.1.2 Lake Naivasha Growers Group

In 1997, the Lake Naivasha Growers Group (LNGG) a largescale farmers association with 95 members, mainly flower farmers but also vegetable farmers was established to:

Look at the sustainability of the farmers and the lake and in that we look at issues of economics, that is selling the flowers, we make sure that the markets are okay and that the conditions are met virtual trades, we also look at the environment, issues of water, social issues, how the flower farmers are relating with the society around them and the workers so generally we are dealing with the sustainability of the flower farming and the relations with communities around us.¹⁵³

The formation of LNGG was a step toward resolving the numerous challenges in the Lake Naivasha area. It arose from disgruntled members who thought that the LNRA was not meeting their needs. Nonetheless, as the LNRA chairman noted, the two organisations have come to realize that they share objectives and continue to collaborate on numerous projects for the benefit of their members. This underscores Wolf’s contention that shared waters necessitate cooperation from their users and that in most circumstances, they would rather agree than fight.

Kiharu observes that prior to the emergence and expansion of flower growing, there were few farms and as a result, water consumption in the Naivasha region was

¹⁵³Oral zoom interview, David Kiharu, LNGG, 29th April 2021

minimal, and water issues were not paid much attention. However, with the introduction of horticulture and aquaculture, the demand increased and competition for the resource became the norm. However, since 2009,

Competition has increased, especially during drought. There was a time we had an influx of livestock coming to look for water in the lake and this interfered with the intake of the farmers. The one that I remember was in 2009 and it hit us the most and we held all these meetings with the pastoralists and the upper catchment people and we realized the need for co-existing. You know in Naivasha we have many pastoralists from the western side of the lake in Narok and we have seen some influx especially during a drought so ours is to make sure that these parties co-exist and the livestock keepers have their access to the lake without interfering with the interests of the farmers so we hold meetings with various bodies, the pastoralists, Imarisha Naivasha, Lana WRUA just to make sure that these businesses co-exist peacefully.¹⁵⁴

Apart from these conflict mediation efforts, LNGG also acts as an advisory body to members of the public who approach them to avert any disputes that may arise.

However, this is purely demand-based, for instance, a pastoralist can come to us and tell us, I am new and I would like access to the water so we tell them the dos and the don'ts and we also talk to the farmers and let them know so and so has approached us and so we just try to ensure that all businesses run smoothly.¹⁵⁵

In order to make meaningful contributions towards resolving the escalating issue of water scarcity in Naivasha, LNGG encourages its members to practice good water stewardship in their activities by adhering to the rules outlined in the Water Act, which are geared towards ensuring equal distribution of water in adequate and good quality to the public. The group also provides assistance with water related conservation efforts organized by the various conservation agencies in Naivasha. They collaborate closely with the WRUA coordination body, Lanab and Imarisha Naivasha.

¹⁵⁴ Oral zoom interview, David Kiharu, LNGG, 29th April 2021.

¹⁵⁵ Ibid

LNGG strives to stay up to date with the most recent technological innovations in the field of efficient water use and encourages its members to develop efficient ways to use water in order to reduce conflicts.

Initially, we had a lot of outdoor growing but people shifted from that and started doing greenhouses and this was just a way of ensuring that they are water efficient. You know, there is water scarcity here so as much as possible, we try to ensure efficient water use so nowadays most of them have more efficient means like using hydroponics, recycling of water to minimize wastage and also to keep up with international standards to buy goodwill and also to access markets.¹⁵⁶

LNGG also works with LANAB WRUA; they hold quarterly sittings to address issues that come up within the catchment and in the various places where the WRUAs are located.

4.1.3 Imarisha Naivasha

In 2011, the government, through the Ministry of Environment and Natural Resources established Imarisha Naivasha for the restoration and promotion of sustainable development in the Lake Naivasha basin and established a five year development plan through a participatory process involving all sectors. Imarisha Naivasha was established by the government following the severe drought which was experienced in 2009. It became necessary to have an organization that would coordinate stakeholders' engagement in the issue of water crisis especially finding ways of dealing with the violent water-related conflicts that erupted post the drought.

Established through Gazette Notice No. 5368, Imarisha Naivasha's mandate is to manage and coordinate a five-year Sustainable Development Action Plan (SDAP).

¹⁵⁶ Oral zoom interview, David Kiharu, LNGG, 29th April 2021

The programme's long-term goal is *"to restore the lake and its catchment areas to its past glory and secure future economic investments."* Imarisha Naivasha came up with the Lake Naivasha Basin Integrated Management Plan (LNBIMP) whereby;

All the aspects of water conservation were considered, that is fisheries, agriculture, environment management, and the water resource management itself and all those stakeholders were involved. We had then WRMA, now WRA, and then we had the WRUAS, the Beach Management Units (BMUs), everyone that was considered a water user was involved. Since then, there have been other initiatives and programmes by the different actors that are all geared towards ensuring that we do not experience such a conflict again.¹⁵⁷

As a coordinating organisation, Imarisha Naivasha is responsible for ensuring that all stakeholders perform their responsibilities and that any duplication of roles in terms of water conservation and conflict resolution is effectively addressed and given due attention. Imarisha Naivasha has a multi-pronged strategy to dealing with concerns such as water access, water quality and quantity, all of which are consistent elements of the basin.

In this regard, we work closely with all the relevant stakeholders to address the main problems which are water access, water quality and quantity. In this programme, we had things like rainwater harvesting to reduce pressure on the lake so we had things like rehabilitation of dams and working closely with WRA to ensure that water quality issues were addressed back then.¹⁵⁸

Imarisha Naivasha has been instrumental in implementing a variety of initiatives to reduce tension among community members in Malewa area and the larger Naivasha. The establishment of a common watering point for the communities to receive water at the Ntoya Common water intake along the Ntoya stream was one such effort. There are 170 families served by the intake. The organization has also been involved in the

¹⁵⁷ Oral interview, Jane Kioko, Imarisha Naivasha, Naivasha, 18th February 2021

¹⁵⁸ Ibid.

construction of watering troughs as well as the installation of a water tank and pipes which supply water directly to the pastoralists' animals. As a result of these activities, the pastoralists in that area no longer needed to take their cattle to the lake, and the communities no longer required pipelines from rivers or streams to their farms, thus reducing the tensions that used to occur anytime they visited the lake or river. Furthermore, the riparian land is safeguarded from degradation.

The organization has also been instrumental in spearheading community initiatives to rehabilitate forests, especially in degraded areas. In conjunction with the Ministry of Environment, Water and Natural Resources, Imarisha Naivasha supported some Community Forest Associations and community groups in the establishment of tree nurseries that can provide seedlings for rehabilitation efforts.

We also supported the actual rehabilitation work in the forests because as you are aware, our forests are sources of water and they have to be taken care of.¹⁵⁹

Imarisha Naivasha has recently had funding troubles, limiting its operations; nevertheless, Kioko describes this as only a glitch in the road, and that better times are ahead, and they will continue to work with the Naivasha community to address water challenges.

4.1.4 Integrated Water Resource Action Plan (IWRAP)

The Integrated Water Resource Action Plan (IWRAP) is an initiative that arose as a result of a research commissioned by the Netherlands government following the drought of 2009. The IWRAP programme coordinated by WWF and involving other basin partners – WRA, Imarisha Naivasha, Kenya Flower Council and three Dutch

¹⁵⁹ Oral interview, Jane Kioko, Imarisha Naivasha, Naivasha, 18th February 2021

partners - arose from the need to work together towards a single vision. IWRAP also includes members of the community, such as WRUAs and Community Forest Associations (CFAs).

The programme's purpose is "to create essential enabling conditions for effective water regulation and governance, sustainable land and natural resource use and sustainable development in the Lake Naivasha basin."¹⁶⁰

We have, through the IWRAP, what we call the Water Allocation Plans (WAPs) and we realized that people don't know when to use irrigation or how much should be irrigated so the WAPS came in to fill those gaps. And this dates back to around 2009 because initially, people thought that water issues were just personal or individual based and so if you have a river passing through your land, that is your river and you do not care what happens downstream. So, the 2009 drought brought a very interesting scenario that the water levels in the lake were very low which meant that animals were coming out just to look for water and the pastoralists were also coming out and then telling a flower farmer that this water you are using is coming from upstream and that you need to support the communities upstream was a hard task because they were convinced that since they had plenty of water, there was just no point to do so. But post-2009, people realized that they need to come together and sort this issue and have a common ground on how to utilize the water.¹⁶¹

Since then, IWRAP has played a vital role in ensuring that water is properly allocated to all of the numerous parties competing interests, resulting in less tension albeit not necessarily elimination of the conflicts.. IWRAP aims at strengthening institutional and technical capacities in the areas of water resource management and governance. The programme has not been without challenges, as a WRA officer noted, especially among community members.

We have to keep sensitizing and teaching the community. A lot of the programmes we undertake are new and even strange to them hence capacity

¹⁶⁰ WWF IWRAP brochure, 2015

¹⁶¹ Oral zoom interview, Samuel Okuku, WWF, 11th March 2021

building and sensitization forms a big part of what we do as an organization. It never stops. Our WRUAs come in really handy in this because they are our link with the community, they are with them every day and they help to reinforce the things we talk about in workshops. Convincing an elderly man that the water passing through his land does not belong to him and so he cannot use it as he wishes is difficult.¹⁶²

4.1.5 Payment for Environmental Services (PES)

Payment for Environmental Services (PES) also known as Payment for Ecosystem Services, is a European Union-funded programme coordinated by WWF and CARE-Kenya in Naivasha. PES is based on the idea that “resource managers/owners are rewarded for good resource stewardship through economic incentives to guarantee sustainable delivery of ecosystem services.”¹⁶³

PES seeks to promote and compensate communities that rely on agro-systems for a living to adopt better practices in farming, conservation and a variety of other activities that have a detrimental impact on the environment. Orwa elaborates:

We tell farmers that you have to take care of the water that you are using for irrigation in your farms, telling them to irrigate early in the morning or late evening when there is less sunshine so you use less water because sometimes when you take a drive through these farms, you find sprinklers set out at noon. Telling them that you do not have to spray your produce when taking to the market, in this country, most of our farmers, if you go to the farms the crops look shiny because they spray them just before they take to the market and this is affecting our health, that you should not farm all the way to the river because if you do this, it means that all the chemicals and the run-off ends up in the river and you end up consuming this same water, we support them with drip irrigation, with certified seeds that can resist the vagaries of climate change and so they get bigger harvests. Then in terms of post-harvest losses because again most of our farmers produce and then they start looking for markets through those guys called brokers who are the one who will decide how much they want to sell so we also try to link them with ready markets. We also trained fish farmers on how best to dig the ponds, the correct species

¹⁶² Oral interview, Beatrice Mwangi, WRA office, Naivasha, 19th February 2021

¹⁶³ David Langat, John Otuoma, Joram Kagombe et al, “ Guidelines for Establishing Payment for Ecosystem Service Schemes in Kenya, July 2017, p.1

to have and to ensure their sustainability because we realized that there were many ponds that had not been done well and were just lying idle. ¹⁶⁴

The PES pilot in Malewa carried out towards the end of 2010 involved two WRUAs; Upper Turasha-Kinja for Turasha River and Wanjohi for River Wanjohi. Several additional parties were involved in this initiative, which included several community sensitization sessions, selection of the hot spot farms, mapping which involved geo-referencing and the eventual conservation work. This project not only helped to resolve recurring conflicts among community members, but it also improved the livelihoods of the Upper Catchment's small holder farmers by providing financial incentives as well as technologies and farm inputs that increased their farm productivity in the long run. Orwa observes that the reception from the farmers and the communities has been encouraging and they have plans to expand to wider coverage.

Further, this programme also involved training of the fish farmers on the best practices of the ponds that they had abandoned and how to make the venture economically fruitful. As a result, according to Orwa, they were able to introduce many more farmers to the aquaculture business while sensitizing them on the best way to utilize the water and general catchment management in order to avert potential conflicts with their neighbours downstream.

Despite the foregoing, PES has been a difficult sell because most farmers still view it suspiciously suggesting that there is need for more sensitization. Making PES effective has remained a challenge due to "lack of clear legislation and undervaluation

¹⁶⁴ Oral zoom interview, Nickson Orwa, WWF, 11th March 2021

of ecosystem resulting in low resource allocation.”¹⁶⁵Government goodwill in supporting policies that seek to protect such communities and increase their capacity while cushioning them is also paramount, according to Orwa.

Sometimes there is what we call lack of goodwill from the government I think for all the reasons that we know and sometimes government takes time and sometimes it is also due to competing interests for example the fact that Naivasha produces more than 70 percent of the flower produce in this country which accounts for something like 9 percent of the country’s GDP so there are people who look at it in terms of revenue so when there are issues, for them it will be where do we get more revenue at the expense of everything else.¹⁶⁶

Other challenges that PES grapples with are issues of inheritance and subdivision which are sensitive to navigate and this impedes its success since land is its mainstay. Additionally, climate change has resulted in increasingly unpredictable weather patterns which also poses a challenge to PES.¹⁶⁷

4.1.6 Lake Naivasha Basin WRUAs Association

The Lake Naivasha Basin WRUAs Association (LANAB) was established in 2012 in accordance with the Water Act to co-manage water resources in the Naivasha basin in collaboration with WRA. LANAB WRUA is an umbrella platform for the WRUAs in the Naivasha basin to amplify their voices to speak as one on water conservation and protection in the basin.

Our mandate is issues of monitoring of rivers and surface and groundwater in terms of quality and quantity We also act as a forum for cooperative solutions, of course, we also work as a platform because in Naivasha there are 12 WRUAs and they are therefore members of this umbrella WRUA which was

¹⁶⁵ Joram Kagombe, “Payment for Environmental Services in Kenya: Status and Opportunities in Kenya,” Conference Paper, July 2014

¹⁶⁶ Oral zoom interview, Nickson Orwa, WWF, 11th March 2021

¹⁶⁷ World Wide Fund for Nature and CARE-Kenya, “Payment for Environmental Services; an Integrated Approach to Natural Resource Management and Livelihood Improvement: A Case of Naivasha-Malewa Project, Kenya,” November 2010

established to deal with cross-cutting issues for example issues of water conflicts as far as transboundary waters are concerned, issues of climate change and issues of equity in terms of accessibility to water.¹⁶⁸

As noted earlier in chapter 3, the Water Act 2016 recognizes WRUAs as the local organisations established by water users to enable communities and water users to participate in water resource management, including decision making, catchment conservation and conflict resolution. LANAB WRUA has collaborated with other stakeholders on a project aimed at reducing conflicts between pastoralists and residents in Naivasha as part of its many other projects.

They accomplished this by adopting their own protection guidelines to govern riparian management. These rules were gazetted by the Ministry of Water and Irrigation, which was led at the time by Honourable Charity Ngilu. In developing these guidelines, they recognized the pastoralists' unique position in that they just needed water for the animals, which could be delivered to them in any location of their choosing. As a result, they drilled boreholes and built dams to collect surface water during rainy seasons. Conflicts with pastoralists over water access were minimized in this way.

The Lanab Water Allocation Plan (WAP) was one of the solutions developed by stakeholders following the 2009 drought. This is a plan that specifies how the lake water should be used during both the dry and wet seasons. A WAP is primarily concerned with the quantity of water and how much is allocated to which use. The WAP includes provisions to ensure adherence, “mechanisms for reporting

¹⁶⁸ Oral interview, Enock Kiminta, Lanab WRUA, Naivasha, 13th July 2021

infringements to the WAP, action against violators and penalties and restrictions against violators.”¹⁶⁹

The various WRUAs under Lanab WRUA have also undertaken various activities in their respective regions of governance to resolve the conflicts that they encounter. Middle Malewa WRUA, for example, developed a schedule for drawing water from the river between a flower farm and the community. Members of the community had expressed concern that they would not have access to water during the dry seasons since the flower farm upstream was abstracting a large amount of water during the day and interfering with the flow of water downstream. The WRUA devised a mechanism that permitted the flower farm to draw water from the river only at night, so as not to obstruct the flow during the day when the community needed the water. This plan was acceptable to both parties and it proved workable and the WRUA has received no conflict reports since then.

In another instance, a flower farm under the jurisdiction of Middle Malewa WRUA begun dumping waste next to a river within the community. The WRUA officials, along with the area chief and some community members paid a visit to the farm. An agreement was reached, and the flower farm found an alternative location for their garbage away from the river. In a move to minimise the conflicts over water that the community at Kapten has been facing with members of Upper Malewa WRUA, Middle Malewa WRUA leaders together with politicians in the area urged the community to support the construction of a dam that will ease their lack of water. The dam had not been finished by the time of this study, but members were optimistic that

¹⁶⁹ Water Allocation Plan, Naivasha Basin, 2010-2012, Water Resources Authority

it would be able to provide water for a small number in the community while they worked on building more dams.

WRUA members singled out hostility from the flower farms and some members of the community as the most challenging hurdle in their work. A lack of commitment from the members also plagues them sometimes, although this is a challenge that cannot be avoided, according to the WRUA chairman.

The work we do here is purely voluntary and somebody has to have a passion for it. And also an interest in environment matters. The WRUAs that are doing well financially because of the various livelihood projects they have do not experience this problem. The money is naturally a magnet. We are trying our best.¹⁷⁰

4.2 CONCLUSION

Several activities undertaken by various organizations and community groups within the Malewa River Basin prior to and following the introduction of new livelihoods have been reviewed in this chapter. Most of these initiatives are official in nature and have been spearheaded by the different NGOs and government-affiliated organizations that are found in Naivasha. This could be an indication of the area's economic significance to the country.

It is worth emphasizing that the communities surrounding Malewa have been active in the processes led by the WRUAs' governing body, LANAB. They applaud the efforts made to guarantee that the valuable resource is protected and issues are resolved, even if they think it is taking too long.

¹⁷⁰ Focused Group Discussion, Middle Malewa WRUA, Kapten, 27th February 2021

As is observable in this chapter, there is a strong presence of initiatives and efforts aimed at conflict resolution, and the stakeholders are well informed of their community's problems. There is, however, a need for the government to make more aggressive attempts to resolve the issue of access corridors to the lake, as many respondents regard it as a sign of impending disaster.

Also glaring is the inability of the WRUAs to stamp their authority as the body mandated to handle catchment conservation issues. This was evident through the kind of treatment they reported to have received in the course of conducting their work. The strength of the WRUAs lies in the diversity of their membership and as such, steps ought to be taken to ensure that this membership has a voice. WRA observes that the apparent weakness of the WRUAs is because “the law does not confer any explicit legal power to WRUAs thus limiting their ability to enforce regulations and laws.”¹⁷¹

Additionally, according to the WRA, some of the WRUAs are also plagued by weak comprehension of IWRM principles, little logistical support, limited administrative or leadership competences and poor funding.¹⁷² As the organization that is in charge of the creation, registration and capacity building of the WRUAs¹⁷³, the WRA must take a more proactive stance to ensure that these entities are adequately equipped to carry out the purposes for which they were formed.

¹⁷¹ Water Resources Authority, Assessing the WRUAs' Performance and the Implication of the Constitution of Kenya 2010 to Water Resources Management, October 2014, p.9

¹⁷² Ibid, p. 10

¹⁷³ Water Resources Authority, Assessing the WRUAs performance, Ibid p.9

CHAPTER FIVE:

CONCLUSION

Overall this study set to look at the nexus between new livelihoods and water-related conflicts in the Malewa River Basin between 1980 and 2012. While the development

of the flower farms in Naivasha town has been beneficial for the nation's economy, it has also had some detrimental impacts, most notably on stakeholders and the relationships among them. The incidences of conflicts have grown and everyone now feels that they are more entitled to the water resource than the other.

Privately owned flower farms have restricted public access to the lake where previously members of the public had free movement. Formerly, fishermen were free to fish whenever they wanted, but today they are limited in how far they can go since some sections of the lake are now considered private property, and accessing them could result in prosecution. In addition, due to the population increase, there has been over-exploitation of the lake since it is a source of livelihood for many people. Thus the government introduced periods where temporary bans on fishing are put in place in order to give the lake ecosystem time to replenish itself. This has also been a point of contention for the fishermen, however necessary it is.

The first objective was to look at the nature of water-related conflicts prior to the introduction of fish farming and floriculture in the basin area. The study found out that most conflicts were over access to the parcels of land along the lake, with individuals complaining to the LNRA that their land had been invaded by their neighbours and the entity would provide mediation services. The riparian areas where the government had created controlled access due to its proximity to the lake was frequently the source of contention. The ranch owners would occasionally disagree about land use, which was mostly related to access to the land and the size of the land. The issue of human-wildlife conflict was mentioned, however, it did not stand out strongly as something that Malewa Basin dwellers had to deal with prior to the introduction of flower farming.

Irrigated agriculture began in the late 1970s and while the farms were only a few, access to the lake to abstract water for irrigation would ignite conflicts since there were issues of trespassing on each other's land, but these instances were not pronounced. The other contentious issue was access to the lake by Maasai pastoralist communities who wanted to use the lake as a last resort water source during severe droughts. During such times, they would relocate to Lake Naivasha in search of water and pasture, and in the process, they would clash with the landowners along the lake who resented their presence because it constituted a security threat to them. The ranch owners complained that cattle would disappear whenever the Maasai were around.

Another frequent source of conflict was between the Maasai pastoralists and the Kikuyu farmers. According to the study, these two groups engaged in conflicts over for land and water, especially during dry seasons. The Maasai would leave their villages in search of water and pasture for their animals and during such times, their Kikuyu neighbours would pitch tent in the deserted farms to utilize them for food production, setting the stage for conflicts.

The second objective of the study was to assess the extent of the new livelihoods and their influence on the basin. As the study demonstrated, conflicts grew with the introduction and expansion of these livelihoods. The increased presence of hotels and flower farms increased the population in Naivasha, putting a strain on the town's social amenities such as housing, health institutions among others. This increase in population saw demand for water for domestic use grow as well as increased abstraction of water from the lake for irrigation purposes in the expanding flower and vegetable farms.

Demand-induced scarcity of water was observed following the movement of people into Naivasha area. Since more and more people are finding employment at these farms, there is a water shortage as a result of the population boom. The social amenities have been greatly impacted by this turn of events, one of which is water, which is no longer sufficient to meet everyone's demands. This phenomenon was also alluded to by the officer from the NAIVAWASCO who observed that the private water vendors within the town have emerged to supplement this need. Further, according to the study, most of the flower farms and hotels have controlled access along the lake where their businesses are situated. As a result, the locals are not able to access these areas as much as they would like to and this is a constant source of conflict.

Aquaculture as a new livelihood was found to be more concentrated in the basin's upper catchment which was out of the purview of this study. Nonetheless, the activities of fish pond owners in the Upper Malewa basin were alluded to by some respondents as a contributor to conflicts. The conflicts that were reported to have a direct relation to fishing were to do with commercial fishing within Lake Naivasha and these revolved mainly around the lack of access to the lake by the fishermen because of the restrictions by the flower and hotel businesses as well as government policies. The fishermen have also not taken well to the rotational fishing bans that are placed on the lake by the Fisheries department. According to them, this is a way of interfering with their trade and to show their displeasure, the study discovered that they hold regular demonstrations.

Furthermore, as the population has grown, challenges of inadequate sanitation services have developed, as officials from WRA and NEMA agencies mandated with

ensuring the protection and safety of water resources noted. The chemicals used in flower farms pollute the water bodies, posing a health concern to the population. Even though these agencies take the required precautions to maintain the safety of this resource, cases of water pollution still exist since they cannot be totally avoided.

According to the study, there are various instances of upstream-downstream conflicts, with each side blaming the other. The basin's upstream users believe they have greater legal entitlements to the water because they participate in conservation activities that secure the resource's availability. In addition, some of the flower farms have also been accused of polluting the water to the point where community members could not use it when it got downstream. Some community members were also said to restrict water flow to downstream communities because they feel that they have more rights over the water since they engage in the conservation efforts to protect the resource, as was noted in Kabati by the Middle Malewa WRUA members.

The majority of the conflicts experienced by Middle Malewa WRUA members are the result of government structural actions. They believe the government, through the designated agencies, is negligent in enforcing the rules and regulations designed to safeguard them. For example, they believe that if flower farms that pollute rivers or obstruct the flow of water downstream for their own use were made to face the full force of the law, they would not have to deal with these concerns on a regular basis. The strength of the WRUAs as catchment conservation and conflict resolution champions was brought into scrutiny as it emerged that despite the legal backing that the community based bodies enjoy, they still face a lot of hostility and defiance from a section of the public who regard them as meddlers. A case in point is the flower farm that was called out for not having toilet facilities for its employees and whose

response was to chase the WRUA members away from its premises. Another WRUA also expressed its frustrations in trying to access a flower farm after they had received complaints from the public about the farm's activities that were causing harm to the water resource. These instances reveal that more needs to be done in order to strengthen community participation in water resources management so as to create a sense of ownership among all the stakeholders and not the us vs. them scenario that seems to be playing out currently. The role of the WRA, the organization tasked with ensuring that the WRUAs carry out their duties effectively and receive the support and the buy-in required from the places they work also came into scrutiny.

Instances of conflict were also reported between government agencies and community members who feel that their rights to access the water resource was being hampered by unfair rules and regulations. These community members continually hold demonstrations to protest what they see as victimization. The community members also complained of favouritism from government agencies towards individuals they considered as foreigners while their rights as Kenyans were ignored.

Public access to the lake was another issue that evoked emotions in many respondents, with many feeling that there is need to address it urgently. Due to the increased feeling of insecurity which was brought about by the growth of population in Naivasha, the flower farms and other riparian land owners resorted to fencing off their properties. This move affected most of the fishermen who could no longer access the lake as well as the pastoralists who used to water their animals in the lake.

Most of the informants expressed frustration at the slow pace in which the government has responded to the issue despite several attempts by the various bodies to bring it to the fore. One such body, the LNRA, reported that it had written several letters seeking

the attention of the Ministry of Lands without success. An informant termed the issue as a time bomb.

Water scarcity is another concern that residents of this region have had to deal with following the mushrooming of flower farms and hotels. This situation worsened following the 2009 drought. The NAIVAWASCO, the authority entrusted with providing water for the city, reported that the organization does not yet have the capacity to distribute water in all the areas where it is required. Water vendors augment this scarcity by delivering water on donkeys or handcarts. The abundance of large flower farms, the majority of which are above 60ha, and the numerous small holder farms, all of which need irrigation, have also added to the region's water shortage. This situation has remained the same, even beyond the study's time frame.

Access to water in the rivers was also mentioned as a challenge, particularly in communities downstream and midstream. Various explanations were given, for instance, one respondent pointed out that consumers of water upstream frequently restrict water flow, especially during drought and when this happens, downstream users do not receive water. Other reasons for the lack of water include government initiatives that have seen water directed to other areas while communities remain without it.

Finally, this study sought to examine the conflict resolution methods that were employed by the Malewa basin residents and determined that much had been done in this direction. Various non-governmental organizations (NGOs) and government institutions in the region sponsored initiatives aimed at resolving and minimizing the conflicts. Despite the numerous problems it faced, the PES project that was piloted in the Upper Catchment was hailed as a huge success in reducing conflicts. Community

members contributed in their various spaces in order to live harmoniously with their neighbours while using the shared water resource.

Stakeholders in the area are aware of how the introduction of flower farming has affected water-related conflicts in the Malewa Basin and have so far supported efforts to address the issue. For example Imarisha Naivasha reported how they received support from the residents in the interventions they took to alleviate disputes around the lake between the Maasai and the hotels and flower farms. The LNRA and the LNNG are also effective vehicles that have left their imprint on the landscape in their efforts to improve relations among the stakeholders. This points to a recognition and acceptance of the need to eliminate these conflicts. The actions that were implemented in the basin yielded positive results.

Nonetheless, more needs to be done because some efforts, such as those outlined in the LNRA's Code of Conduct, do not appear to bear much fruit, as the association's chairman pointed out. This is most likely because participation in the group, and hence adherence to the regulations, is entirely optional and not legally binding. Perhaps establishing consequences that are agreed upon by all the members could herald a shift in how the management plan is best enforced, resulting in higher rates of success.

It is interesting that none of the conflict incidences that were relayed to this researcher reached the Water Tribunal, which is the body mandated by the Water Act to resolve disputes involving water. Until it was brought to their attention, some of the respondents were not even aware that such a body existed. A LANAB WRUA official pointed out that the conflicts that found their way to the Water Tribunal are usually extremely serious and delicate and that the Tribunal is usually the last resort when all other conflict resolution avenues have failed. This goes to show that in as much as the

Malewa residents experienced frequent water related conflicts, they were still well within their means to handle them in amicable ways, making a case for most of the scholars' assertion that water induces cooperation rather than conflict.

This study was encapsulated within Thomas Homer-Dixon's Environmental Scarcity Theory which makes the case for a linkage between resource shortage and conflicts. Homer-Dixon asserts that when people are competing for a limited resource, they are more likely to engage in conflict. The instances of conflicts that are described in this paper hint to a battle between the various groups, with their main grievance being a lack of access to the water for their different uses. Antagonism has grown among the populace as a result of this situation.

Overall, the study found that the dynamics of water-related conflicts in the Malewa River Basin had shifted. Prior to the advent of the new livelihoods, the residents largely dealt with conflicts related to land-use and access to land for farming. To a lesser extent, access to water in the lake for irrigation purposes was also an issue, although the complaints were about trespassing on the land while collecting water from the lake and not on a lack of water availability.

Following the introduction of flower farming, the tensions shifted to resource scarcity, as there is not enough water for everyone due to population growth. While fish farming as a livelihood was not rampant in the area that was under study as had been hypothesized, the issue of access to fishing within Lake Naivasha was a source of conflict for the residents. The public's and fishermen's access to the water is impeded by the obstacles erected by the enterprises surrounding the lake. Furthermore, the issue of community distrust of conflict-resolution authorities also arose. The communities believe that these entities are more concerned with the rights of large-

scale flower producers and hotel owners to acquire water than with the rights of ordinary citizens.

Given the significance of the Malewa River Basin and Lake Naivasha in general, more concerted efforts are required to ensure that the issues raised in this study receive the attention they deserve. Most of the sampled conflict resolution initiatives are focused on protecting the needs of their members – as it should be – but this is often to the disadvantage of others. The management initiatives could benefit from a more inclusive strategy to capture the needs of all the stakeholders. The area's economic, social, and ecological sustainability is contingent on sound water management methods implemented by all stakeholders, as well as a recognition of the significance of each stakeholder's role. This will promote collaboration and cohesion rather than conflict.

Water is an essential ingredient for healthy lives and healthy economies and for Kenya to achieve the ambitious goals of Vision 2030, securing our water resources should take a front seat since water is an enabler of these development structures. As climate change continues to bring increasingly unpredictable rainfall patterns and as population rates continue to soar, the issue of water security will only become more challenging. Urbanization has dealt a painful blow to the country's forests; there is widespread encroachment into forested areas and riparian spaces to create settlements and land for cultivation and pasture. One of the solutions to these issues lies in addressing the challenges being experienced by communities residing along water bodies and sensitizing them on the need to properly conserve these water sources.

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