

**AN ANALYSIS OF LOCAL DYNAMICS IN CONFLICTS OVER USE OF NATURAL  
RESOURCES IN THE MARAKWET-POKOT BORDER REGION OF KERIO VALLEY,  
KENYA.**

**BIWOTT JULIUS KIPCHUMBA**

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**UNIVERSITY OF NAIROBI.**

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## DECLARATION

This research project report is my own original work and has not been presented for examination at any other university or institution.

Signature ..... Date .....

Biwott Julius Kipchumba

C50/85864/2016

This research project report has been submitted for examination with our approval as university supervisors.

Signature ..... Date .....

Prof. E.H.O Ayiemba.

Department of Geography and Environmental Studies

University of Nairobi

Signature ..... Date .....

Dr. Martin Marani.

Department of Geography and Environmental Studies

University of Nairobi

## **DEDICATION**

I dedicate this research project to my entire family, friends and all those who gave me support and encouragement during my study.

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First I would like to thank The Almighty God for his guidance and establishment during the entire period of this venture.

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## LIST OF ABBREVIATIONS AND ACRONYMS

ACF	Australian Conservation Foundation
ADP	Area Development Program
ASL	Arid and Semi-arid Lands
AVRP	Armed Violence Reduction and Prevention
CPJC	Catholic Peace and Justice Commission
CSO	Civil Society Organization
DID	Department for International Development
DNIVA	Development Network of Indigenous Voluntary Association
FGD	Focus group discussion
HRW	Human Rights Watch
IGAD	Intergovernmental Authority on Development
KII	Key Informant Interview
NGO	Non-Governmental Organization
UN	United Nations
UNDP	United Nations Development Program
UNEP	United Nation Environmental Program
UoN	University of Nairobi
USAID	United States Agency for International Development

## **ABSTRACT**

Kerio Valley in Kenya is an area characterized by competition over natural resources especially water, land and pasture. This competition is often a source of violent conflict over resource rights particularly between Marakwet and Pokot communities, the purpose of the study was to identify internal and external actors driving conflict between Marakwet and Pokot, analyse the roles of drivers of the Marakwet-Pokot conflict, identify the strategies that stakeholders and actors employ to resolve conflicts, and suggest conflict management approaches that may deliver sustainable cooperation over use of natural resources. The study collected primary data from a stratified random sample of 281 pastoralists and agro-pastoralists to which a questionnaire was administered. Data from the Key informant interviews, Focus Group Discussions and observation with various actor groups complemented questionnaire data. Secondary data consisted of materials drawn from official statistics, policy documents, laws, institutional documents, and research reports. The study collected primary data from a stratified random sample of 281 respondents to which a questionnaire was administered data from Key informant Interviews, Focus Group Discussions and field observations with various actor groups complemented questionnaire data. Secondary data was from publications. Measures of relationship such as correlation analysis were used to understand trends in quantitative (questionnaire) data while qualitative data was analysed by content analysis. The results show that Majority of respondents 231(82.2%), 219(77.9%) and 201(71.5%) said water, land and pasture are critical for their livelihood and very often lead to frequent conflicts in the Kerio Valley leading to decreased production, increased casualties, deaths, displacement and destruction of property with youths, elders and politicians were very often being main actors. The study recommends formulation of policy on peace building, promotion and understanding of conflicts in the valley. Further research should be carried out to help formulate community-based guidelines for protection and prescribe measures for integrated natural resource management.

## CHAPTER ONE: INTRODUCTION

### 1.0 Background

This chapter provides background information about conflicts of resources, problem statement, research justification/significance, research questions and study objectives.

The term ‘conflict’ often generically refers to a clash of issues, interests or values (Mason and Muller, 2017). A conflict can be either latent (lying underneath but not easily visible until there is a trigger) or open, and may arise from differences over issues, competing interests (often over benefits or losses) or a clash of value systems on how things should be done (Ahmad, 2015). Both latent and open conflicts can undergo transformation into violence – armed or unarmed (Nielsen, 2013).

Conflicts has led to unfavorable sufferings to the individuals globally for quite a while, numerous lives have been lost through vicious clashes, properties destroyed, there is closure of schools and health centers . Resource conflicts in general have a focal point that may move starting with one locus then onto the next while impacting the force, perseverance, dynamism and intricacy of the contention together with elements identified with legislative issues and financial matters of character, shortage, rivalry, access, and value in a given network (Huho, 2015). There have additionally been contentions (Castro & Nielson, 2013) that challenge between networks for rare assets is an element of high populace development rate, dry season, expansions of unlawful arms and battles for political power and monetary opportunity.

Natural resources are becoming scarce due to unprecedented growth of human population and a spiraling demand for resources like land, water and natural gas(Reese, et al., 2014). Resource scarcities trigger competition among both individuals and communities leading to conflicts, which may then degenerate to violence. Conflicts over natural resources are inevitable and ubiquitous (Bob and Bronkhorst, 2011). According to Ratner et al., (2013)conflict results when one feels discriminated from the behavior of the other person sharing the same resource. In this line of thought, conflicts in the management of natural resources occur when there are disagreements and disputes regarding the access and management of the natural resources (George, et al., 2015).

Where there is abundance of natural resources, conflicts can rise from mismanagement and plunder by power elites who may capture most of the resources and leave the majority of the population competing for a small portion of the resource wealth (Humphreys, 2015). Buoyed by various factors, masses may use violence to stake claims on resources in a protracted conflict for control of resources.

In all conflict situations the state is an interested party because the state controls political, judicial and institutional dimensions that manage natural resources and resolution and mitigation of such conflicts(Burnley, 2011). However, the state may want to uphold certain political alliances to remain in power so as to perpetuate state influence or promote conservation objectives(Baqe, 2013). Also, differences in gender, age and ethnicity may inform how different natural resources are utilized bringing to the fore cultural and social dimensions of conflict regarding ownership, access, and distribution of revenues and environmental costs(Vanessa, 2018).

Reduction or avoidance of conflicts over natural resources especially through stakeholder participation is a major aspect of sustainable development. Some conflict resolution and management strategies can be adaptive in nature, persistence or recurrences of conflicts have driven communities and individuals to adaption where they fight rather than flight from the conflict. If they don't win the fight resolution of conflict through traditional systems where elders and government are tasked with negotiation on how the conflict should be resolved.

Participatory natural resource management may ensure that the people's unique needs are understood and addressed(Varisco, 2013). Although granting a voice to the people does not fully solve a conflict as new tensions are created by those who were not involved. This results to the poorer group becoming economically more secure and decrease in intergroup tensions. Natural resource-based poverty reduction projects in the Kerio Valley are possibly vulnerable to such tensions. Distribution of revenues from conservation increases the value of conservation to people in the grassroots. Conflicts and disputes over use of natural resources are complex(Ododa, 2013). The conflicts should regarded in the perspective of a new development pressures, multifaceted web of demographic change, sensitive natural environments, structural economic and legal inequalities, ethnic and personal differences, multiple interests of various groups, individuals organizations and individuals from both outside and inside rural communities(Gakuria, 2013).An emphasis on reducing the dependency of local communities on natural resources, continuing

dominance of conservation goals over the livelihood needs, lack of community participation in planning, and limited revenue flows from use of natural resources will likely aggravate conflicts.

## **1.2 Statement of the Research Problem**

Persistence of resource conflicts over decades between the Marakwet's and the Pokots has negative effect on the social livelihoods for individuals and development of the nation. Communities living in the valley have had to come up with adaptive strategies aimed at managing conflict or resolving it due to its distressful nature. The study sets up a stage which will guarantee an arrival to long-term stability and peace.

The study will also emphasize the understanding of main actors involved in resource based conflict and also the critical drivers catalyzing the conflicts. The study findings will inform national and county policy on integrated management of available resources and community conflicts that results from access and utilization of the available resources as well as generate new discourses for academia in the area of resource conflicts.

## **1.3 Research Questions**

The study sought to answer the following questions:

- i. Who are the various actors involved in the Marakwet-Pokot conflict in the Kerio Valley region?
- ii. What are the roles of conflict drivers in the Marakwet-Pokot conflict over natural resources?
- iii. How has the Marakwet –Pokot conflicts over natural resources affected environment, economy and society in the Kerio Valley?
- iv. What are the various strategies employed by stakeholders and actors to resolve natural resource conflicts?
- v. What conflict management approaches can deliver sustainable cooperation over use of natural resources and long-term peace in the Kerio Valley?

## **1.4 Overall Objective**

To analyze local dynamics in conflicts over use of natural resources Kerio Valley. The study aims at exploring the Marakwet-Pokot conflict situation in the Kerio Valley region arising from

ownership and access to natural resources and attempt a solution based on new perspectives on the causes of the perennial and persistent conflict.

#### **1.4.1 Specific Objectives**

The specific objectives of this study are to:

- i. To identify actors (and characterize their roles) in the Marakwet-Pokot conflict in the Kerio Valley;
- ii. To evaluate the role of conflict drivers of the Marakwet-Pokot conflict over natural resource in Kerio Valley;
- iii. To assess the effects of the Marakwet –Pokot conflict over natural resources,
- iv. To identify strategies employed by stakeholders and actors to resolve natural resource-based conflicts between Marakwet-Pokot, and;
- v. Suggest conflict management and resolution approaches that may deliver sustainable cooperation over use of natural resources and long-term peace in the Kerio Valley.

#### **1.5 Hypothesis of the Study**

H<sub>0</sub>: The intensity of conflicts does not significantly vary with resource availability.

H<sub>A</sub>: There is significance difference in intensity of conflict with resource availability.

#### **1.6 Justification of the Study**

Previous efforts to resolve the natural resources conflict failed to yield any long-lasting solution. Consequently, this study will explore the Marakwet-pokot conflict to understand its drivers and identify opportunities for managing this conflict in a way that makes the two communities to co-exist, cooperate and derive mutual benefit from the valley's natural resources. Determining the main actors in the conflict and their roles and identifying opportunities for cooperation and mutual benefit will lead to sustainable peace in the region. The study findings will go a long way in making policies that are resource based; also it sets stage for other academicians.

The present study will give a platform for other studies to be conducted in other parts of the countries on natural resources related conflicts and how they can be minimized. The study identifies stakeholders that give support and positive strategies to the community which is aimed at managing and resolving conflicts. In adding information to the body of knowledge on conflicts



over natural resources, social and economic impacts of Marakwet-pokot conflict and various strategies that local communities can apply to resolve natural resource-based.

The research also highlights some of the most pressing peace building challenges that confront the pastoral communities like the Pokots and Marakwets. By understanding the local dynamics and political intuitions of the two communities will comprehensively advance and implement capacity building and principles of collaboration and enhancement for peace building. This will counter the poor resource management regimes that has been found to increase vulnerability of resources to conflicts and at the same time promote sustainable use of the available resources for enhancement of intergenerational and intragenerational equity.

### **1.7 Scope of the Study**

In spite of the fact that this study gives an exhaustive examination of analysis of the role of local dynamics in natural resource use conflicts in Marakwet County, the study was confined to investigating the Marakwet-Pokot conflict circumstances in the Kerio Valley area emerging from property ownership and access to common resources like water and pasture. The study was carried out between August and September 2019. Questionnaires complemented with key informant interviews and Focus Group Discussion was used to collect primary data from 281 and 10 respondents respectively. Purposive sampling and Random sampling was used to sample the respondents.

### **1.8 Limitations**

The research was limited to scope and time to exhaustively conduct the study. There was a challenge in getting the populations of conflict community members at the time of the study, a challenge in getting an adequate number of key informants in the interviews because of their busy schedules. None the less, those who were available contributed immensely to the issues relevant to the study.

In this social research, ethical considerations were to be observed. The respondents consent was needed to participate in the research. Moreover, they were informed that the study will only be used for study purposes.

Also lack of adequate funds was a limiting factor during the collection of data for the study, thus reducing the number respondents expected to be sampled

## **1.9 Outline of chapters**

Chapter one has discussed background information on resource conflicts globally and its causes. The chapter has identified the objectives and research questions as well as identified the limitations that were anticipated throughout the research process as well as defining the various significant terms in the context of this study.

Chapter two gives the location of Kerio valley region, topography, population size and structure and the profile of resources available.

Chapter three reviewed the available literature on natural resource based conflicts related to the research topic so as to give emphasis and understanding on the project. The chapter also provides a conceptual framework to show how Independent variables, intervening variables and dependent variable relate to each other.

Chapter four presents the methods and techniques used to collect data and methods employed in the study.

Chapter five gives the results and data collected from the respondents and its discussion while chapter six gives recommendations.

## CHAPTER TWO: THE KERIO VALLEY REGION

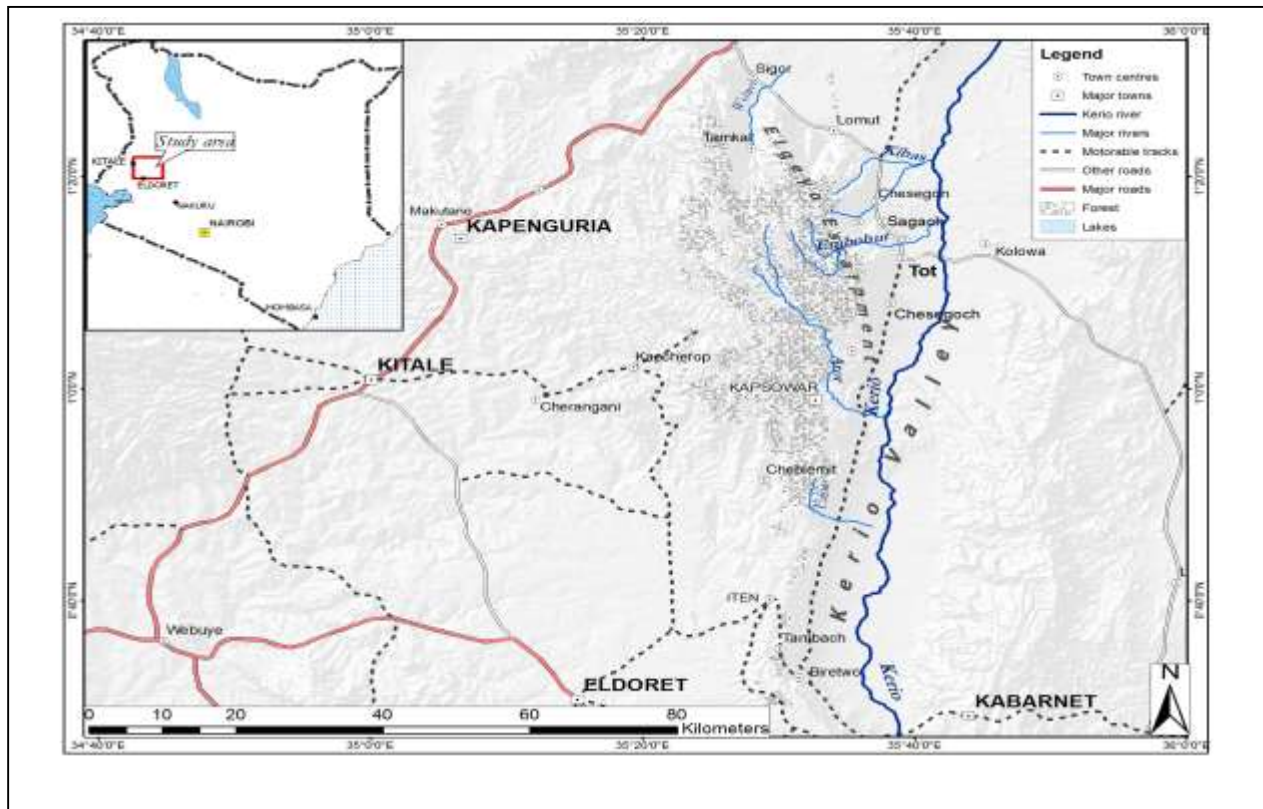
### 2.0 Introduction

This chapter describes the Kerio valley on the following subheadings; location, topography, population, economy, profile of natural resources and the Marakwet-Pokot conflict case

### 2.1 Location of Kerio Valley

The study was carried out in Kerio Valley which is an operational region that is found in Elgeyo Marakwet County between the escarpment of Elgeyo and Tugen Hills with an elevation of 1,500 meters. The Valley stretches approximately 80km from south to north which broadens to a width of about 10km.

The valley makes up 40% of the county; the area is characterized with disasters like landslides and droughts. (Chirchir, 2018).



**Figure 2.1: Location of Kerio Valley**

*Source: Marakwet Heritage Project.*

## **2.2 Topography and Climate**

Kerio valley is an arid area characterized by erratic and unreliable rainfall which averages 860mm annually. Generally the terrain is rough with altitude ranging from 800m to 1500 m above on the escarpments. Basic topography mostly comprises of gneisses from the Basement System with the soils mainly being alluvial due to sedimentation down the highlands and escarpments. The region is rich in mineral soils such as diatomite, fluorspar, marble and limestone. (Cheserek et al., 2012) The temperatures of the region go from at least 14 °C to a limit of 24 °C. Precipitation goes every year from 400 to 1,400 mm.

## **2.3 Population, Size and Structure**

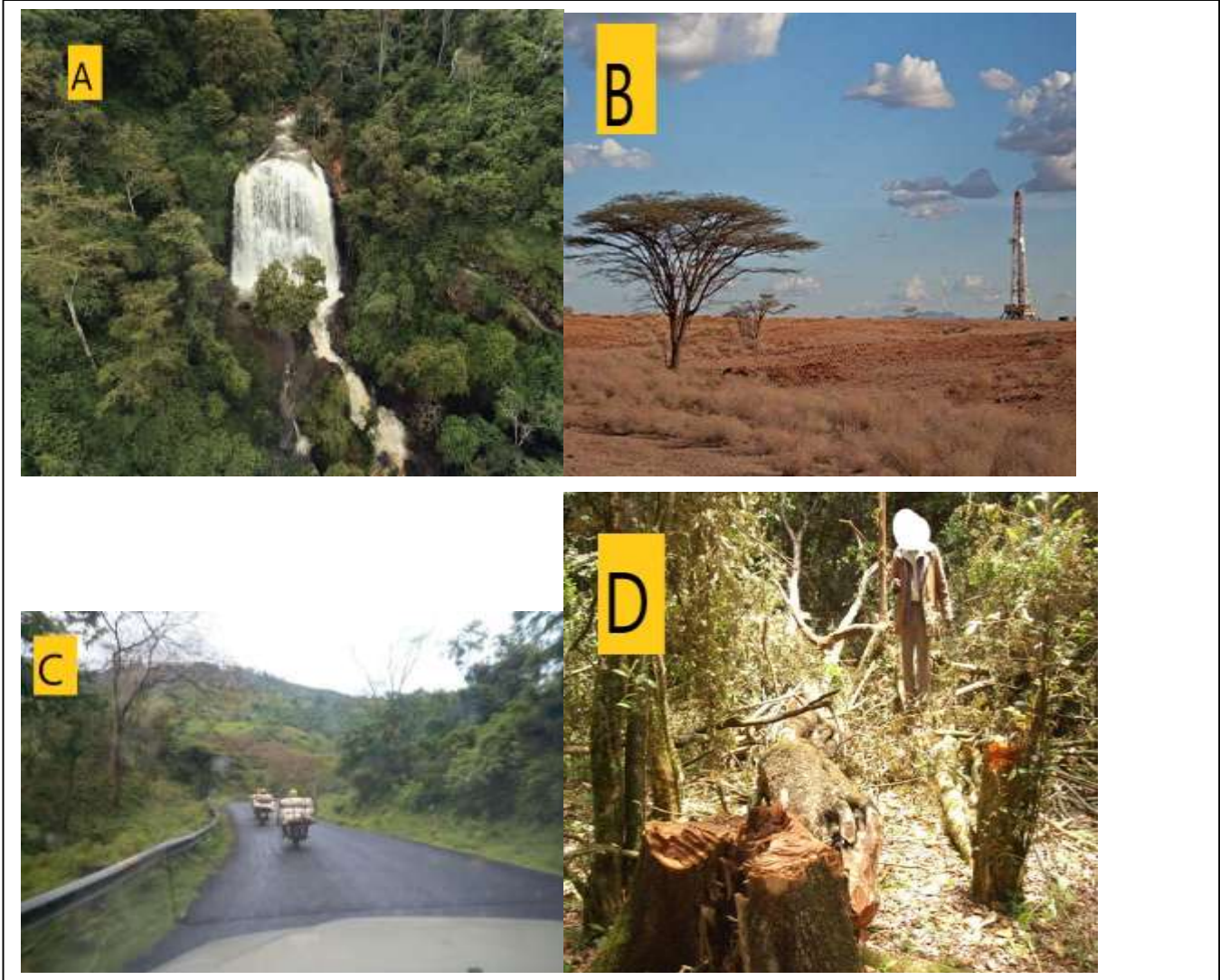
Elgeyo Marakwet county's total population was 370,712 in 2009 (National Population and Housing Census). The 2012 population projection was 401,989 (Male: 50%, Female: 50%) distributed in 77, 555 households with a coverage total area of 3029.9 km<sup>2</sup>. The county has age distribution of 0–14 years (46.4%), 15–64 years (49.6%), 65+ years (4.0%) with 2.8% annual growth rate. A growth or increase in population creates competition on the available resources. Youth bulges in the area leads to an increase in the labor force however with a high number of unemployment and illiteracy the chances of conflicting on common resources become high.

## **2.4 Economy**

The region is endowed with a lot of economic resources of invaluable nature such as tourism attraction sites, wildlife and rich mineral deposits.

Both the Marakwet and Pokot living in the region practice agro-pastoralism, they draw their livelihood from cultivation of crops such as mangoes and maize and livestock rearing. The number of livestock denotes the wealth status of an individual making livestock keeping a valuable cultural livelihood (Cheserek 2012).

The levels of poverty in the county are geographically distributed. At the Escarpment and the Kerio Valley, poverty levels are as high as 67 percent of the population while in the Highlands poverty levels average 47 percent. Minerals like fluoride are mined Kimwarer. Some viable economic



activities in the county include farming and livestock keeping. Tourism is another economic activity in the region. Others includes mining and prospecting of recently discovered oil deposits in Kerio Valley as shown in figure 2.2 (Vanessa, 2018).

**Figure 2.2: Profile of Natural Resources in the Kerio Valley**

- a) **Water resources:** the region has both permanent and temporary rivers shown in the study area map.
- b) Oil prospects in Kerio valley
- c) Bodaboda carrying charcoal from Kerio national reserves and
- d) Logging at Kerio national reserves.

### **2.5 Profile of Natural Resources in the Kerio Valley**

Kerio valley is endowed with a lot of natural resources which includes minerals, land, water and pasture, however there exist no sustainable or integrated ways in which some residents utilize those resources, this has led to immense degradation of the natural resources during dry seasons residents Kerio Valley experience water shortages and residents have to travel up to a distance of over 25 km.

Lack of proper or integrated management of resources in Kerio Valley has led to environmental degradation which has resulted to change in rainfall patterns and consequently decline in river volumes thus threatening the cohesiveness and livelihood security in the valley. Forest encroachment is experienced in areas like Embobut, with rampant burning of charcoal and deforestation on other forest reserves as shown in figure 2.2, has led to destruction of water catchment areas however the county government has been prompted to come up with ways that could curb the menace, this include enactment of Acts like the charcoal Act of 2017, planting of exotic trees in the affected catchment areas (County Government, 2017).

Beautiful and scenic escarpments of Kerio valley provide incredible sites for tourist attraction and sporting activities due to favorable altitude and good climatic conditions, Kerio Valley Game Reserve forms also a crucial resource for the region.

## CHAPTER THREE: LITERATURE REVIEW

### 3.1 Introduction

The chapter reviews documented information relating to trends on natural resource-based conflicts and also presents a theoretical framework and empirical reviews. The chapter begins with a global context, African context and Kenyan context of resource-based conflict.

### 3.2 Global trends in conflicts and cooperation over natural resources.

Disputes result from use of natural resources such as land, pasture, water, minerals or forests. Such disputes have been termed as disagreements which are of importance to development of a region specifically if it is resolved. (Bayramov, 2018). However, such disputes when exacerbated with other factors like divisions in politics, corruption and weak state of governance leads to violence, lack of development and destruction of property. (Nielsen & Zikos, 2016).

There have been armed conflicts characterized by the land ownership conflicts in rural areas of El Salvador. Various rebel groups, including the Nepal insurgents, use the unequal distribution and ownership of revenue from minerals to validate their fighting and marshal support. In turn, the insurgents promise various transformations including land reform in case they get power (Fisher, 2017). Additionally, equally, rebels have generated from export of Timber in Burma and illegal tariffs on logging in the Philippines (Bob and Bronkhorst, 2011). Notably, in the Caucasus region, the possibility of future revenues from oil and location of oil pipelines triggered the Abkhazia and South Ossetia conflicts in Georgia. Therefore, the determination of Russia to control Chechnya and contain the rebel groups in the area is partially motivated by the urge to guard these vital pipeline routes (Theodore, 2017).

In Nicaragua, rebels capitalized on the failed agrarian reforms and, thus, recruited dissatisfied peasant farmers. Consequently, such issues which are related to minerals have distorted conflicts and most likely interrupt the peace building process. Equally, over time, such indirect triggers are likely to become stronger and, thereby, accelerate conflict's course (Ratner *et al.*, 2013). In Yemen, and the Palestinian Territories, there had been conflicts over groundwater which is a rising phenomenon. Threat of groundwater use has grown exponentially in recent years due to urban development and industrial agriculture. Two projects conducted research on the extractive

industries and finite resources: NEBE and GOMIAM. NEBE focused on hydrocarbons (petroleum, gas) and minerals (copper, gold) in localities of Colombia, Bolivia and Peru which are home to indigenous peoples and other marginalized groups. In the context of Colombia, specifically, disputes over control of mineral resources, and community access to these resources have been intimately bound to five decades of civil conflict, with issues of control over mineral resources opening up within the post-conflict context(Rus, 2015).

Latin America, land use transformations are driven by monoculture production of soy, palm oil, and sugar cane, with marginalized communities of African descent experiencing the brunt of change underpinned by powerful state and corporate actors, with agro industry development linked to new forms of economic power in the Amazon. Conflicts are linked to deforestation and agro-strategies that maintain and expand disputes for land and territories(Burnley, 2011).

Nations in the East and Southeast Asian region share common borders which lead to sharing of resources like water. This has led to tensions and conflicts arising from resource sharing. Some of these conflicts result from resources over exploitation, pollution and building of barriers. Some countries also dispute the control of maritime territories like coral cays, reefs and islands. Apart from natural gas and oil, the East and Southeast Asian region is rich in fisheries(Mason and Muller, 2017). High exploitation of fishing resources has reduced the number traditional fishing grounds across the region and hence more pressure is currently being exerted on resources in South East China Sea (Annegret Mähler, 2011).

### **3.3 The Selected African Context**

Conflicts in most African countries have been linked to utilization of the existing natural resource, the resources have been used to exploit the poor while benefiting the elites, and the benefits have been channeled to forming armies and propelling the elites to power which they use to guard the same resources for their own benefit instead of development of the country. (Mohamud,2012). “peace, control over natural resources and their revenues often stays in the hands of a small elite and is not used for broader development of the country”(Burnley, 2011).

#### **3.3.1 Nigeria**

The Niger Delta which covers an estimated 70,000 square kilometers with an estimated population of around 31.7 million people as per the 2006 census report is one of the known natural resource



endowed conflict areas in Africa. The Niger Delta region is mostly inhabited by minority ethnic communities with the Ijons (Ijaws) constituting the largest community. Other ethnic communities inhabiting the Niger Delta include Isoko, Ogoni, Ndokwa, Etche, Urhobo, Ikwere, EdoItsekiri, and Ogba(Wall and Callister, 2015).

The Niger delta is considered to be well strategically positioned region due to the fact that the region has numerous oil processing installations and also acts a key base from where many oil companies operate from with notable one being the Chevron-Texaco(Rus, 2015).Regardless of all these huge oil resources in Nigeria making the country among the major exporters of oil in the world, the country is still characterized by extreme poverty and under development. Majority of the population inhabiting the area lack basic infrastructure developments such as piped water, hospitals, power, good roads networks and other necessary amenities(Lemarkoko, 2010). While analyzing the oil endowment in the area vis-à-vis the people situation, Nielsen & Zikos, (2016) asserted that the Niger Delta is the richest region in Nigeria in terms of natural resources endowment, but the region full potential is not yet suitably developed since the same is continuously being threatened by environmental devastation and deteriorating economic conditions. Lack of the basic amenities in the Niger delta is as a result of environmental degradation(Green, 2015).

In Nigeria, majority of oil communities are situated in rural areas hence they are perceived to be facing worse poverty conditions than the urban areas. The oil village communities of Niger Delta since they are mostly based in rural areas are classified under this category irrespective the massive wealth they contribute towards the nation's economy(Fisher, 2017). According to UNEP, (2015) the oil village communities of Niger Delta are rural communities, hence, they are exposed to very limited economic opportunities. For the entire region, population of around 30 million people, social services and proper infrastructure and are generally deplorable and vastly inadequate. Thus, leaving the oil villages to compete for these inadequate social services and struggle against exclusion from the distribution of the revenue(Murzakulova, 2017).

### **3.3.2 Sierra Leone**

For a long time, inequitable natural resource wealth division has been a key driver of a long civil war in Sierra Leone. Diamonds as well as other minerals are used to fund combatants. Even though efforts have been made to end the war the impact of the conflict is still evident as shown by rural

marginalization and youth unemployment(Billon, 2010). Concessions of minerals cover about 80% of the country and a smaller percent of cultivated land has been contracted for industrial purposes. Forests in Sierra Leone are threatened by logging and slash, burn agriculture, encroachment and charcoal. Natural resource sector management is closely tied to stability and peace, rural integration, improved governance and economic development (UNEP, 2015).

Mining in Sierra Leone is majorly artisanal and, therefore, almost entirely alluvial.<sup>89</sup>Yengema, Tongo and Zimmi areas are the main contributors of diamond resources used to fund the war. Sierra Leone has witnessed various aspects of resource conflict including the rebellion under the late Foday Sankoh's who rebelled against four successive governments between 1994 and 2002. Foday Sankoh was the leader of the RUF (Revolutionary-United-Front). His rebellion led to around one-hundred thousand casualties with many more thousands being displaced(Peter, et al., 2015).

### **3.3.3 Angola**

In Angola, just like in Sierra Leone, Diamond is the main solid mineral. Over 50% of Angola's foreign earnings emanate from diamond sales. As such, together with South Africa and Botswana, Angola is one of the main producers of Diamond in Southern Africa. However, the role of diamond in Angola's economy was slightly reduced after the country discovered oil in the 1980's(Green, 2015). Nonetheless, like many natural resource rich countries in Africa, the natural resource endowment in Angola has been characterized by civil wars. In particular, the conflicts have been between UNITA (National-Union-for-the-Total-Independence-of-Angola) and MPLA (the Popular-Movement-for-the-Liberation-of-Angola). The conflict between UNITA and MPLA is considered as the longest and bloodiest civil war in Africa(Varisco, 2013).

Armed conflicts in Angola were mainly linked to oil and diamond over a 27 year long civil war. During the war period, oil was regarded to be of great significance towards the country's political economy hence affecting Angola, affecting not only the nature of the economy, but also the course and eventual outcome(Ahmad, 2015).Therefore, oil mostly contributed towards the prolongation of the armed war. Angola, plight began with the enormously unsettled decade of the 1970s that saw the collapse of peace agreement between various rebel factions(Upreti, 2015). As a result of these rebels fighting with the major cause being oil resource control, the war in Angola continued till 1990's. The end of the cold war fundamentally transformed the nature of Angolan conflict

since various opposing parties instantly scrambled for the control and possession of the nature resources endowed territories of the country(Sullivan, 2011). The warring parties in this case were well determined to exploit any valuable nature resource as early as possible even going to an extreme of funding the conflicts in order to continue undertaking their activities. The 1990s peace initiatives that had begun under Bicesse Peace Accords of May 1991 was disastrously affected by this scramble for the possession of Angola's natural resources(Kemunto, 2016).

### **3.3.4 Liberia**

In Liberia, particularly under Taylor' administration, existence of minerals was the main cause of violence, diamond and iron were the main solid minerals involved in the country's natural resource conflict. In particular, the management of Diamonds was the main contributor of conflict in the country. The discovery of Diamonds in the country occurred just before World War II. However, meaning discovery occurred later, though, the discoveries were less in comparison to Sierra Leone(UNEP, 2014).

### **3.3.5 Ghana**

In Ghana, the Nawui and Gonja were at war in May 1992 while in Guines there has been constant land related conflicts between Peul and the Soussou(Tyler, 2016).Oil is one natural resource in Africa which has drawn close to linkage next to solid minerals, hence perhaps generating much attention and interest in Africa. This is as a result of various key factors which include oil being highly profitable, consequences of its exploration on the environment, the politic nature of it internationally and its contribution towards the social economic and the ethno political affairs of the gifted nations(Elfverson, 2016).

### **3.3.6 Democratic Republic of Congo**

Conflict in DRC has been more complex. Notably, the continuous fighting witnessed in the country post-independence has been local and international players seeking to control the country's resources. Equally, corruption in resources obtained from minerals, which in turn has resulted minimal benefits to the population from mineral revenue, is another cause of the mineral-conflict in the country(Green, 2015). A closer examination at the three countries that is Liberia, Sierra Leone and Nigeria leads to three major ways that the management of solid minerals has caused mineral conflicts. Corruption by governing elites and poor governance is the main cause of the

conflict. Corruption has been the main characteristic of countries endowed with minerals across Africa (Muigua, 2012).

In Eastern DRC, mining of Gold is the most important subsector artisanal mining business. Despite previous indications of massive mining of gold, current data shows mining levels that exceed any previous estimates or expectations (Anne, 2017). 3T mining used to attract more miners. However, the mining has experienced a sharp decline for various reasons including low demand and prices, international regulations, deposits depletion and the growth of a semi industrial mining sector. The shift from 3T mining to gold has had significant consequences on the financing of criminal networks and armed groups in the country (Green, 2015). Notably, in Eastern DRC, gold is widely available and, therefore, armed groups have ample opportunities in terms of taking their share, especially through taxation. Different reforms from the army tend to have inadequate results on revising the behavior of units deployed in mineral-rich areas. Illegal taxation by the Congolese army is more frequent than armed group interference in artisanal mining (Anne, 2017).

### **3.3.7 The Sudan Resource Based Conflict**

In the Sudan, pastoralism and agriculture are the main source of livelihood. As a result, it is inescapable that people will compete over resources (land, pastures and water). Traditionally, there existed conflicts due to use of resources between animal keepers and crop growers. (Le Billon, 2010). Land allocation or ownership also steers conflicts. Different policies related to land use have triggered conflicts and resource competition. Customary laws were formulated and implemented in 1970, under which the government became the sole owner of all land, available to individuals only through issue of leases. The manner in which the system operated however led to many negative factors such as corruption and bureaucratic tendencies (Mohamud, 2012).

### **3.3.8 Rwanda**

Rwanda is considered as an example where issues relating to natural land scarcity have caused armed conflict to a genocide level. According to a recent survey Bigagaza, et al., (2013) on land scarcity in Rwanda, the survey has provided particularly stunning statistics. Rwanda is the highest population density in Africa as it has a higher annual growth rate of 3.3% and an average of 271 persons per square kilometer. Rwanda may have presented the extreme, case of land resource contributing to genocide. However, high population density has also been experienced in other countries though on much lower scale and has fueled conflicts in some countries, the same problem

is not being experienced in all African states. However, irrespective of the predictions based on the rapidly growing population in Africa, available data doesn't mention anywhere that nature and scarcity would be a major concern of all the continent's states. Whereas in countries such as Burundi, Rwanda, and Eritrea, where all the agricultural arable lands are entirely already in use, they might thus continue experiencing the challenge of land scarcity, this problem doesn't affect the continent as a whole as it has still ample land which can still be inhabited (Rus, 2015).

### **3.3.9 Tanzania**

In Tanzania, a number of ethnic based land ownership conflicts have also been reported mostly between Haya and Sukuma Kagera region northern part of the country. Also, there is conflict between the Arabs and the native African coastal ethnic groups in the south (Humphreys, 2015).

### **3.3.10 Somalia**

Somalia's history of conflict reveals an intriguing paradox; many of the factors that drive armed conflict have also played a role in managing, ending, or preventing war. For instance, clannism and clan cleavages are a source of conflict—used to divide Somalis, fuel endemic clashes over resources and power, used to mobilize militia, and make broad-based reconciliation very difficult to achieve Mason and Muller 2017. Most of Somalia's armed clashes since 1991 have been fought in the name of clan, often as a result of political leaders manipulating clannism for their own purposes. Yet traditional clan elders are a primary source of conflict mediation, clan-based customary law serves as the basis for negotiated settlements, and clan-based blood-payment groups serve as a deterrent to armed violence. Likewise, the central state is conventionally viewed as a potential source of rule of law and peaceful allocation of resources, but, at times in Somalia's past, it was a source of violence and predation.

Economic interests, too, have had an ambiguous relationship with conflict in Somalia. In some places, war economies have emerged that perpetuate violence and lawlessness, while in other instances business interests have been a driving force for peace, stability, and rule of law.(UNEP 2014).

Conflict can be fueled by the distribution and revenue of natural resources. As such, the motivation framework can convincingly describe the resource-armed conflict relationship. Notably, the rebel-government conflict is caused by alleged unfair access, inadequate distribution of benefits from natural resources and lack of control over such minerals. The motivation of the rebels is to enhance distribution of minerals in terms of access, control and revenue. On the contrary, the government's motivation is to use force to avoid losing control over revenue and valuable minerals (George, Schillebeeckx and Liak, 2015).

### **Summary and Conclusion**

From the reviewed literature, sub-Saharan Africa is seen to have the most rich and diverse resources globally, however the development that is driven by natural resource utilization has not been fully felt. More so it can be contended that people go to war over natural resources, and weak natural resource management strategies can only exacerbate conflict situations since supervisory structures fail below expectations. While many of the countries including Kenya are trying to address the gaps created by the weakness of governance institutions in the continent, there still exist challenges in regard to natural resource management in Africa broadly and in Kenya specifically. Based on the resources wars hypothesis, it depicts that poor nations or communities will engage each other in fights with an aim of securing access to a resource, a decline or scarcity of a resource is critical.

### **3.4 Trends in Conflict and Cooperation over Natural Resources or assets in Kenyan with A Special Emphasis on the Kerio Valley.**

#### **3.4.1 Conflicts over land (Kikuyu-Kalenjin; Maasai-Kikuyu)**

In Kenya conflicts occur in different forms, according to Amungwa, (2011), this includes; (a) conflict among pastoral communities (b) refugees based conflicts (c) conflicts of pastoralist and crop farmers and (d) ethnic conflicts. In Kenya, many kinds of these conflicts have been recorded where the Kalenjin, Maasai, Kikuyu, Kisii, and Luo, among others, are engaged in periodic conflicts: The Kikuyu and Kalenjins, the Masai versus Kikuyu, the Kisii versus Luo, in the coastal region between the Mijikenda and the non-coastal people, and the Kipsigis and Kisii on the Bomet and Nyamira county border in the southwest (Kipkemoi, 2017).

Furthermore, he established that the existing environmental pressures have changed conflicts dynamics, he found out that it increased pressure on them to raid other communities so as to restock their herd (Opiyo, et al., 2012). The drought of year 2000 also caused water deficits in arid and semi-arid districts of Kenya. This water shortage coupled with shortage of pasture exacerbated between rival groups. Marakwet pursue a mixed farming and cattle-rearing livelihood, and are not nomadic. Pokot often have a nomadic or semi-nomadic livelihood; in some locations most pursue mixed farming and cattle-rearing, whereas in other areas they are pure pastoralists.

Historical accounts suggest that Pokot had a more agricultural lifestyle before the 19th century, when they became increasingly pastoralist (Annegret Mähler, 2011). Among both groups, cattle are highly valued; in addition to basic sustenance, they play important ritualistic and social roles. Land in Kerio Valley is mainly communally (rather than privately) held and land allocation within the communities has traditionally been based on clan affiliation (Kipkorir 2013). To some extent this has changed, and communal land has been changed to private ownership despite its tenure being unclear (Mohamud, 2012).

#### **3.4.2 Boundary Conflicts (Nandi-Luo; Kisii-Luo; Kisii-Kipsigis).**

The two communities have long lived side by side. Borders between the communities were fluid before being delimited along ethnic lines by the colonial administration. Dominant narratives suggest there was a relatively peaceful coexistence, with cross-border conflicts taking place at times, but in most cases these were quickly managed or resolved (Gakuria, 2013). Relations between the groups were regulated by elders, who would meet to negotiate about access to resources and about how to resolve cases of violent conflict (Chirchir, 2018). The historical relationship between the groups is commonly described as having “always” involved some level of raiding and violence, but with a clear escalation taking pace during recent decades: the raids have become more violent, involving more killing and destruction of property, and retaliatory attacks have led to a further increase in conflict intensity (Cheserek, 2012). This general description was uniformly supported by local residents interviewed in 2014 (Chirchir, 2018).

#### **3.4.3 Conflicts over water and pasture (most between pastoral communities in ASALs).**

Most conflict analysis mention a combination of underlying causes, including economic, socio-cultural and political factors. The area where the groups live is characterized by competition over scarce natural resources (e.g. land/pasture and water); in turn, this scarcity is compounded by

droughts and diminishing water supplies and pasture, leading to increased competition. While the cattle raiding dimension has often been most highlighted in news accounts of the violence, the conflict has to a significant extent centered around borders and on utilization of pasture for livestock, Marakwet side had better pasture compared to the Pokot side (Chirchir, 2018). Conflict over water rights along the Kerio River was reported by the colonial administration already in the 1930s. Competition over land and water in the Valley, and government's failure to resolve competing claims, has been cited as the main cause of conflict between the groups.

Relatedly, there has been disagreement over the use of land as private property vs. communal grazing land, especially when lack of land adjudication left this an open question (Muigua, 2012). In 2001 there was violence in the region as Pokots were claiming the existing border (along the Kerio River) and arguing the overhead electric power supply line, several kilometers west of the river, should be seen as marking the new boundary (Njeri, 2015). Raids and attacks led to displacement of people and led to land grabbing or land usage for grazing. Following initial raids, the Marakwet had retreated from some of their land near the river; the Pokot may have interpreted this as the land being available for use, whereas the Marakwet resisted giving up the land permanently. Reportedly, around a quarter of the Marakwet population was displaced during the height of the conflict (Elfverson, 2016). Greiner (2013) points out that renegotiation of administrative boundaries and ethnically defined rights to land play an important part in "cattle raiding conflicts" in the area, and that there is an important connection to questions of electoral constituencies and hence clear incentives for politicization of these local border disputes.

#### **3.4.4 Conflicts over Forest resources**

Many devastated ethnic minorities live in forested territories and governments have verifiably ignored these areas and their kin. Thus, property rights are frequently ineffectively created. Thusly neighborhood populaces have constrained faithfulness to governments and look to different gatherings to perform conventional government capacities (Ayoo, 2010).

Outside intercession, especially when it is benefit driven, can likewise cause neighborhood disdain and later clash. Governments have neglected to perceive nearby individuals' cases to rights over woods. Timber, mineral, oil, and tree yield blasts and resettlement endeavors pull in outside



gatherings to forested locales. These gatherings frequently go into struggle with the nearby individuals or with one another.

After war circumstances can be especially annihilating for forested zones. Wars frequently secure woodlands, debilitating financial specialists and leaving individuals hesitant to go into the backwoods. However, when the contention closes, governments may attempt to pacify previous radicals and give support to deactivated governments powers by enabling them to extricate timber and convert forested land for agribusiness. After clash, outcasts and uprooted individuals come back to territories of timberland deserted during war, and new individuals go into forested regions where it was beforehand too perilous to even consider living. It is likewise a reality that grounded outfitted individuals with restricted business openings regularly become engaged with unlawful ranger service exercises, which the frail governments rising up out of contention circumstances have constrained capacity to control.

### **3.4.5 Conflicts over Mineral resources**

Recent ethnic acrimony over discovery of mineral deposits in Kenya has been captured in a report published in April, 2016 by the United Nations University (UNU-WIDER) titled, “The inequality-resource curse of conflict” (WIDER Working Paper 2016/46), the intensity of conflict for high unit-value minerals is prevalent in countries with high ethnic inequalities. In Kenya, this is mainly highly attributed to a history of grievances related to the skewed allocation of resource revenues. The study also observes that conflict is lower for the discovery of low unit value ores, but the intensity of conflict increases for high unit-value minerals.

Over the last few years, the country has raised consummate interests in the international commodities market after the discovery of several commercially viable natural resources. Mainly, Kenya has discovered massive deposits of oil, natural gas and coal. These include oil deposits in Turkana County and Kerio Valley, and coal in both Kitui and Lamu counties. There was also a lot of excitement rise of vested interest after millions of metric liters of underground water were discovered in Turkana, promising a new lease of life for the dry north for the foreseeable future.

In several jurisdictions worldwide, the discovery of mineral deposits and other natural resources has been a bane, rather than a blessing. Instead of being seen as part of national wealth, the resources have led to internal and at times cross-border wars. In some cases populations where these resources are discovered have sought autonomy from the rest of the country, with the aim of having total control to what they see as their birth right. Naturally, such isolation has been countered with violence from the rest of the country as they seek a piece of the pie, or by the government.

Resource related conflict is not an entirely new threat in Kenya. Multi-party politics in the 1990s triggered the era of ethnically motivated land clashes. During the same period there was the ‘Majimbo’ debate where some regions, like the then Coast Province, sought cessation from the rest of the country on account of owning unmatched resources (like tourism), whose revenues they did not fully enjoy. Certainly some pastoral and nomadic communities in dry areas still have deadly conflicts over water sources for their livestock. The report also attributes Religion in setting off resource related conflicts. A case in Nigeria’s Biafra war in the 1970, which flared up after discovery of oil in the predominantly Muslim north. The latter sought independence from the larger Nigeria leading to a bloody civil war running for years. Neighboring Sudan is another classic example of inter-ethnic and religious conflict. For years, the oil rich south fought for autonomy from the Khartoum based government in the north over oil revenues. Some multinationals have been blamed for starting and fueling factional wars in order to have an exploitative monopoly of high value minerals.

### **3.5 Theoretical Framework**

#### **3.5.1 Structural Conflict Theory**

The investigation proposes to embrace Structural clash hypothesis otherwise called Structural viciousness hypothesis as its hypothetical supporting. This theory contends that competitions over common assets are occasioned by, among others control relations and financial disparities among the different gatherings in the contention zones (Ahmad, 2015). This suits the examination as it will arrange all the investigation factors in the auxiliary clash hypothesis. The hypothetical establishment of basic clash establishing lies in the thinking that contention occasioned by characteristic assets are connected to basic shortcomings or nonappearance of structure to oversee such assets (Mason and Muller, 2017).

The accentuation of the auxiliary clash hypothesis is that practices of people in networks are influenced by inconsistent circulation of assets. The foundation of basic asset strife can be followed to radical basic hypothesis created by the Karl Marx (Wall and Callister, 2015). The hypothesis demonstrates that drawn out clash circumstances like the Kerio Valley is brought about by struggle entertainers exploiting the financial imbalances to benefit themselves to the detriment of neighborhood network individuals. This is propagated through compulsion or war hence rearing a cycle of contention that is reliant on characteristic asset extraction. As per Fetherston, (2011), imbalance is the basic strand that cuts crosswise over clash at various times, with the level of contention subject to the level that the contention gatherings can exploit existing disparities. Along these lines when individuals experience inconsistent access to assets the outcome is strife.

(Wenona, et al., 2014), presented that the principle precepts of the hypothesis are that contention is dictated by the manners in which social orders are sorted out and organized. His, contention reflects the contention of Karl Marx's that financial structures decide how operators will act in struggle zones. Point of view on basic clash hypothesis was later created to demonstrate that the connection among strife and regular assets depends on struggle triangle. Struggle triangle is a powerful procedure including structures, frame of mind and conduct which continually change and impact each other (Wall and Callister, 2015). Change in structures and how much specialists/on-screen characters can exploit change in structures are key determinants to how a contention draws out.

After sometime this influences different operators who may take part in the contention because of the steady auxiliary disparities. The outcome of delayed auxiliary disparities prompts conflictual conduct making the conduct. This will thusly prompt conflictual conduct which in this manner develops and winds up viciousness along these lines, basic clash hypothesis exhibits the impacts of disparity in social orders, and how absence of structures to oversee assets prompts struggle. The nearness of regular asset in Kerio Valley has changed the structure in networks. The impact of this has been the strengthening and debilitation of the network individuals simultaneously (Lokiyo, 2014).

Comprehensively, normal assets in the Kerio Valley have presented an auxiliary material partition inside networks in town networks, prompting basic clashes or viciousness as the common assets have supported a few and disfavored other network individuals. The warring gatherings and networks who profit by the assets are the individuals who propagate savagery or the powerful bunches in such regions. In certain circumstances, hindered gatherings may profit by continues that originate from regular assets. In any case, this on most events happens when the network individuals are utilized as conductors, which is made conceivable by presence of frail structure as engendered by basic clash hypothesis.

In spite of, the significance of auxiliary clash hypothesis it has been censured for dwelling more on material enthusiasm of contention operators while barring non-material enthusiasm for clashes. Be that as it may, this hypothesis is vital to this investigation due to its accentuation on the job of inconsistent dispersion of assets and power.

### **3.5.2The Environmental Scarcity Theory**

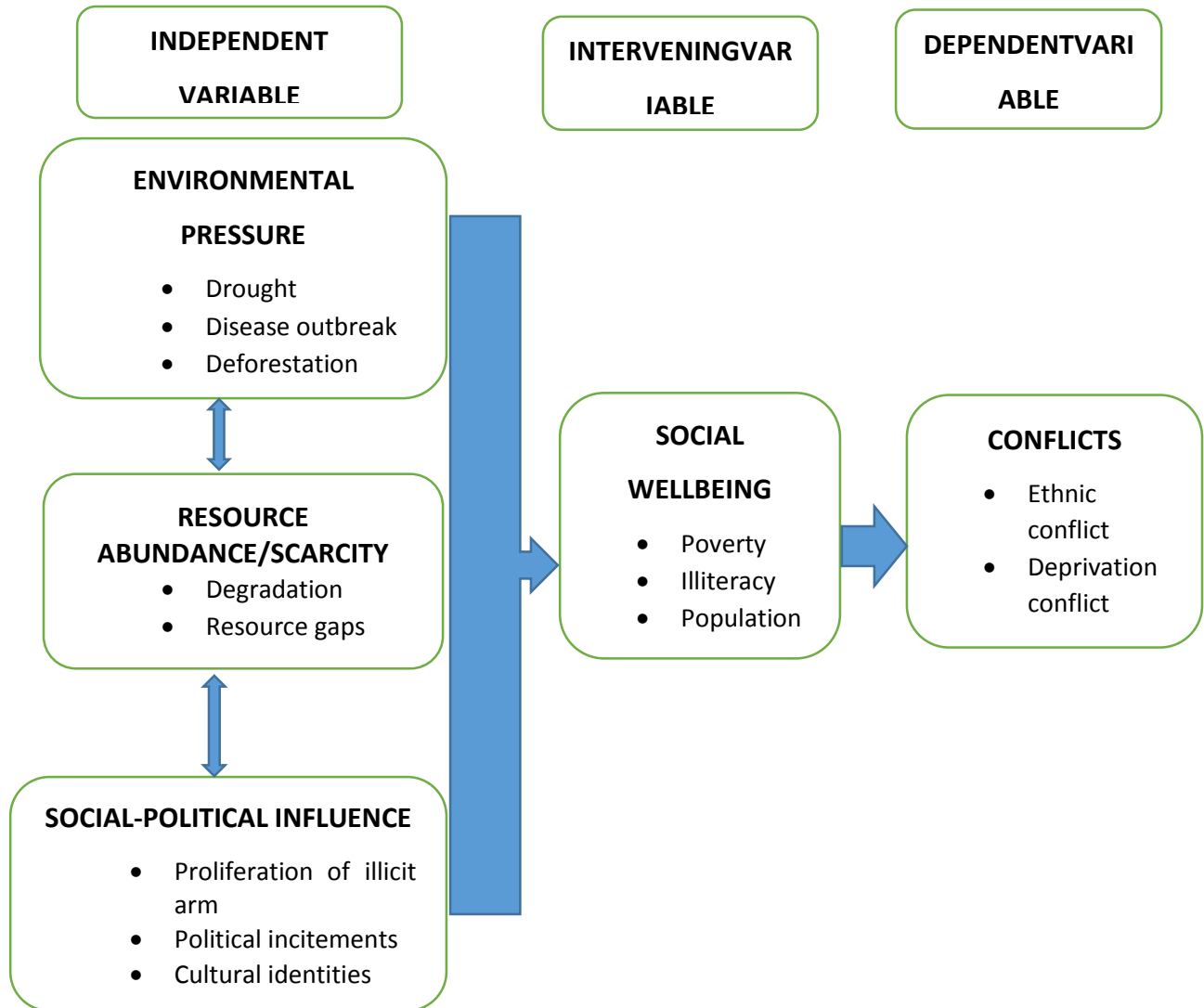
Another pertinent hypothesis to this investigation is the Environmental Scarcity Theory. This hypothesis is based on the reason that reasons for struggle are worldwide in nature. Thomas Homer-Dixon is perhaps the most punctual advocate of the hypothesis and states that ecological shortage can prompt rough clashes. Struggle related with natural shortage can incorporate yet not constrained to ethnic conflicts, common hardship (rebellions), and shortage prompted wars out of loss of wellsprings of employments and the careless conduct of the state and exclusive class (Burnley, 2011). Ecological shortage hypothesis is like the neo-Malthusian hypothesis that stipulates that populace development as a natural factor can prompt clash. In spite of the fact that the closeness between ecological shortage and neo-Malthusian hypothesis has been referred to noteworthy contrast still exists between the two. Neo-Malthusian hypothesis contends that asset clashes are occasioned by statistic factors. Ecological hypothesis then again contends that asset clashes are occasioned by "natural components" of which statistic variables are simply yet one viewpoint (Mason and Muller, 2017).

As indicated by natural shortage hypothesis, asset clashes are brought about by various ecological elements, which can be social, political and monetary. These elements are directed by statistic factors, for example, high populace weight accordingly driving clash. Galtung, one of the solid defenders of natural shortage hypothesis contends that auxiliary savagery can be clarified through the focal points of declining rare assets in networks. He further contends that asset shortage is aggravated by the predominant auxiliary conditions that effects on constrained assets (Sullivan and Nasrallah, 2011).

Herdiansyah, et al., (2014), contended that shortage as a wonder is on the expansion in many networks. Shortage in many networks is upgraded through populace weight and with nonappearance of regular asset the board structures can prompt entomb network struggle between different people and gatherings. This is unpretentious type of contention that is show in most clash zones inside the gatherings. Ecological corruption may compound asset clashes since it diminishes the amount or nature of existing regular assets. Albeit natural corruption can prompt fierce clash, this only from time to time happens with the most widely recognized clash been auxiliary clashes (Bavinck, et al., 2019). Natural shortage hypothesis has three primary measurements: "Supply-actuated shortage, request initiated shortage, and basic shortage". Supply initiated shortage happens when drained assets lead to strife. Request actuated shortage happens when populace development prompts struggle by draining common assets while basic shortage happens when assets are held by a couple to the detriment of other along these lines coming about into asset clashes (Varisco, 2013).

The commitment of ecological shortage hypothesis to struggle is interceded by disparity that exists in networks, with incredible shortage in regions of high imbalance prompting rough clash when contrasted with regions with low shortage and low disparity. This hypothesis is embraced in this investigation since it will supplement the holes of basic clash hypothesis that spots material enthusiasm at the focal point of contentions and disregards different components that reason strife. Ecological shortage hypothesis accentuation on non-material elements will be fundamental to understanding the reasons for assets with networks in Kenya, and by expansion normal asset the board structures that applies in Kenya. The hypothesis will likewise help the analyst in understanding the nexus between material elements and non-materials factors in characteristic asset strife and the current administration structures.

### 3.5.3 Conceptual Framework



**Figure 3 1: Conceptual Framework on resource use and conflicts.** (Source: Researcher)

The conceptual diagram above shows the interrelationship between environmental pressure, availability of resources, and social political influence (independent variables) with conflicts as a dependent variable. The framework above stipulates that conflicts which takes part either as ethnic or deprivation conflict may result from degradation of available resources with existence of a wider resource gaps amongst the Marakwet and Pokots communities and is exacerbated by political influence whose background is manifested on the cultural identity, and some communities have access to illicit arms which prompts them to attack the other community. Social wellbeing or

livelihoods act as an intervening variable that links both the independent and dependent variables for example with high levels of illiteracy most young men end up being on the frontline of ethnic wars, population increase exerts pressure on the existing resources.

### **3.6 Knowledge Gap in Literature.**

Main knowledge gap in the literature reviewed is lack of empirical evidence on government account on the value of existing natural resources. The government has not taken into account the social dynamics and construction nature of the resources thereby failing to explain the reason why scarcity or resource boom of a resource is not a determinant factor of conflict, the scarcity of resources in many developed nations did not prevent development, Mohammed (2015), Therefore, a holistic assessment of available natural resources and how they bring about conflict in Kerio Valley has to be undertaken to avert the negative impact of resource-based conflict on livelihoods and development. Critically assessing the interaction between natural resource and conflict will also aid in understanding what resources are under pressure thus agitate for its conservation to avert resource degradation due to “resource rush”. Regrettably, the rural communities’ ignorance is manipulated; this diversity has very often been used as a tool to create suspicion, fear and disrespect, ultimately dividing and to destroying the community. Some school of thoughts believes that public policies might be the cause of conflicts whereby some policies and its implementation have aggravated conflicts.

## **CHAPTER FOUR: METHODOLOGY**

### **4.1 Introduction**

This chapter gives an overview of the research methodology; it includes research design, study area, data collection source and method, data collection tools, the target population, sampling techniques and size, data analysis and research ethics.

### **4.2 Research Design**

The research design is the conceptual structure within which research is conducted. It consists of the blueprint for the collection, measurement and analysis of data. As such the design included an outline of the framework of study, availability of various data, and observations. It means the exact nature of the research work in a systematic manner (Kothari, 2003). This was a cross-sectional study. The study used quantitative and qualitative design where respondents were administered with semi structured questionnaire, Focus Group Discussion and Key informant interview conducted.

### **4.3 Population Target and Sample**

#### **4.3.1 Population Target**

The target population was Marakwet and Pokot Communities within the Kerio Valley in Elgeyo Marakwet County, Stakeholders like Government security team, Local community like the chief, Sub Chief and local elders

#### **4.3.2 Sample Design**

The study adopted mixed sampling methods that comprised of purposive sampling and random sampling techniques. Stratified random sampling was used to select household heads. (Kothari2003). Stakeholders like Government security team, Local community like the chief, Sub Chief and local elders will be Key Informants and were selected purposively.

#### **4.3.3 Sample Size Determination**

Cochran (1963) noted that stratified random sampling technique Increases precision and works well with an heterogeneous population. The research settled on 281 respondents due to financial constraints and inaccessibility of some areas in the valley due to insecurity.



The Cochran formula is:

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where:

- $n$  is the population Size,
- $e$  is the margin error,
- $p$  is the proportion of the population which has the attribute in question, if proportion is unknown, set  $p=0.50$ , which is the maximum variability
- $q$  is  $1 - p$ .

$$n = \frac{(1.96)^2(0.5)(1-0.5)}{(0.05)^2} = 384 \text{ households}$$

#### **4.4 Methods of Data collection**

##### **4.4.1 Questionnaires**

A questionnaire was used to collect primary data from respondents. It is a efficient tool as it is quick and a cheap way of obtaining large amounts of information from a large sample of people (Creswell 2003). This tool is appropriate because it gathers information as it is. The open end questionnaire gives an interviewee chance to explain or give information freely based on the topic at hand (Kothari, 2008). It also allows a large number of people to give feedback and maintains the anonymity of the respondent. The study used questionnaires (see Appendix V) to collect data, the researcher administered the questionnaire and respondents were asked various to state some of critical resources to livelihoods of their households.

##### **4.4.2 Key Informant Interview**

Key informant interviews are an in-depth interview between a researcher and people well versed with the study area. It enables the researcher to be able to collect data from people who have first hand information about the residents and can also give insight on the main problems and its remedies.. Key informants were purposively selected from Chiefs, sub chiefs, local elders and

security chiefs. Two area chiefs one at Tot and Chesongoch area accepted to be interviewed for roughly 30 minutes and their response recorded. The KII had an advantage for the moderator as it enabled him to probe for more in-depth analysis and ask professionals to elaborate more on their efforts in maintaining and resolving conflicts based on natural resources. Some of the independent variables collected through KII are the strategies used to resolve conflicts and conflict management approaches employed by the two communities.

#### **4.4.3 Focus Group Discussion**

Focus group discussion is a joint group of people of either gender coming together for an interview and discussion. The FGDs enables the respondents to give a detailed elaboration on their response, also it enables then moderator to have an in depth analysis of the topic of discussion. For these study three focus group discussions was done among the residents. Members were randomly selected with the groups having 10, 10 and 12 respectively. Respondents were given time to discuss the causes of conflicts and actors involved. Data collected from Focus group discussion were summarized into discussion with other information presented in verbatim form. This tool of data collection was helpful as it expounded on variables that were not clear in the questionnaires, it gave more information like what were the roles of conflict drivers in Kerio Valley.

#### **4.4.4 Observation**

Observation is a data collection method that involves watching and noting down the characteristics, the behavior or the current state of an object, area or a phenomena. What is observed can also be recorded by use of photography, it is an efficient way as it gives additional information which is accurate. On this study the observations played a big part in confirming the availability and status of natural resources and tone within the communities, land left after displacement, injuries afflicted to survivors, graves of persons killed during conflict and check the impacts and strategies employed.

### **4.5 Validity and Reliability**

#### **4.5.1 Validity**

Validity is a state of research being able to put test what it sets out to test. Criterion validity was used to ensure that the measured variables are actually what was measured and no other variable.

Thus, the validity of the instrument was checked by my supervisor an expert in the field to establish whether it meets the objectives of the study and if the question reflects the desired response. The validity was improved before distribution for actual collection of data.

#### **4.5.2 Reliability**

It refers to an extent to which the findings of a study can be replicated with similar data under same treatment to produce similar results. The reliability of the research instruments was established by the researcher before application and subsequent analysis and consequent presentation by way of testing and retesting. The researcher piloted the instrument in a sample of eligible participants who were qualified to be participants for this study but however, they were not sampled. Emerging issues that arose otherwise be understood differently was addressed by correcting them. This ensured standardization of the instrument through correcting areas that was otherwise be ambiguous and not easily understood.

#### **4.6 Methods of Data Analysis**

Once data is collected, editing was done for consistency across the respondents; it was then coded after summarizing and entered into a computer. Analysis of data was conducted using SPSS. Descriptive statistics such as frequencies, standard deviation and means was used to summarize, organize and simplify the data collected. Correlation analysis was employed to test the relationship between dependent and independent variables. A significance level of 0.05 was used. On bivariate analysis, all independent variables were tested with the dependent variable to determine their level of significance. Confidence level of 95% was used to estimate the strength of association between independent variables and the dependent variable. The threshold for statistical significance was set at  $\alpha = 0.05$  and a two-sided p value at 95% confidence intervals (CI) reported for corresponding analysis.

On multivariate analysis, all independent variables identified to significantly associate at bivariate analysis and was considered together in a multivariate analysis. This was performed using Binary logistic. Adjusted odds Ratios (AOR) together with their respective 95% Confidence Interval (CI) was used to estimate the strength of association between the retained independent variable. Data generated from Key Informant interviews and Observation during the study were edited and coded

then analyzed thematically based on the objectives of the study and then reported in the discussion and verbatim form.

#### **4.7 Ethical Considerations**

Ethical considerations protect the fundamental rights of participants including respect for privacy while maintaining the highest level of confidentiality. To conduct this study, the proposal was submitted for ethical approval. A permit to carry out research was requested from National Commission of Science Technology and Innovation (NACOSTI). An Informed consent was developed and administered to the participants. The right to participate in the study or not rested with the respondents and this was respected at all times during the study. Respondents were informed that it is their right to choose whether to participate in the study or not and even withdraw from the study at any time. No inducements or rewards were given to participants to join the study. Confidentiality and anonymity were maintained at all times. No identifying data was recorded either in voice or video recording without the permissions from respondents and all information given was used strictly for research purposes only and data collected was stored, analyzed and reported in formats that won't allow identification of the individual participant. There were no invasive procedures carried out on the participants, so no physical risks were encountered.

## **CHAPTER FIVE: RESULTS AND DISCUSSIONS**

### **5.1 Introduction**

This chapter gives the results and discussion of the findings based on the study objectives, this chapter also analyses the demographic characteristic, socio-economic characteristics and the role played by actors in the resource conflict in Kerio Valley.

### **5.2 Response Rate**

The sample size of this study was 384 respondents. The study response rate for this study was 281 making up to a 73.2%. The rest (26.8%) of the interview schedules couldn't be met due to financial constraints and difficulties in accessing some of the areas in the valley.

### **5.3 Socio-Demographic Characteristics**

The findings in table 5.1 show that respondent's age ranged from 18 to 81 years, with mode 33 years and the mean age was  $43.36 \pm 3.40$ . The findings showed that 72(25.6%) were between 23-39 years, 62(22.1%) between 40-49 years, 15(5.3%) 70 years and above and 56(19.9%) were below 30 years, this implies that majority of respondents were of middle age and were willing to be to respond to study questionnaires. Slightly more than half of the respondents 154(54.8%) were married with 11(3.9%) being widowed at the time of the study. More than half 179(63.7%) of the respondents were male while 36.3% were female and majority 263(93.6%) were Christian. Most household heads are men and they turned up to respond to questions. Women responded to questions only where the men happened to be absent from home. In cases where both parents were absent, the eldest son aged 18 years or above could take charge and fill the questionnaire. There is gender stereotyping in the community since males are entrusted with decision-making while females have very little decision-making powers.

**Table: 5.1: Socio-demographic characteristics of the respondents.**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percent</b>
<b>Age</b>		
18-29 years	56	19.9%
30-39 years	72	25.6%
40-49 years	62	22.1%
50-59 years	41	14.6%
60-69 years	35	12.5%
70 years and above	15	5.3%
<b>Gender</b>		
Male	179	63.7%
Female	102	36.3%
<b>Marital status</b>		
Single	96	34.2%
Married	154	54.8%
Divorced/Separated	20	7.1%
Widowed	11	3.9%
<b>Religion</b>		
Christian	263	93.6%
Muslim	18	6.4%

**Source: Field Data.**

From the findings on table 5.1 Youths from age 18-29 makes up 19.9 % of the respondents and they are critical as they are the ones who provide human labor and are believed to be the ones mainly involved in conflicts. According to (UNDP, 2007) youths in developing nations have limited education and employment opportunities; this decreases their opportunity of establishing themselves as adults in an increasingly competitive world. Youths should be given a chance to participate in decision making so that they may see the relevance of other decision makers because their action or responses can be violent or non-violent.

### 5.3.1 Socio-Economic Characteristics of Respondents

The results as indicated in table 5.2 show that 117(41.6%) of the community members had primary level of education, 76(27.0%) had secondary level while 29(10.3%) had tertiary level of education and 59(21.0%) indicated they did not have any formal education. Therefore, most of the community members were education and this shows that the information collected was comprehensive. Most 96(34.2%) of the community members indicated their occupation was largely livestock keeping, 87(31.0%) of the community members indicated their occupation was farming, 46(16.4%) indicated their occupation was business and 43(15.3%) were employed.

**Table: 5.2: Socio-Economic Characteristics of Respondents.**

<b>Characteristics</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Level of Education</b>		
No formal education	59	21.0%
Primary	117	41.6%
Secondary	76	27.0%
College	21	7.5%
University	8	2.8%
<b>Occupation of respondents</b>		
Livestock keeping	96	34.2%
Crop cultivation	87	31.0%
Hunting/gathering	9	3.2%
Business	46	16.4%
Employed	43	15.3%

**Source: Field Data.**

Data on business and occupation was collected so as to know the dependency ratio and economic hardships that may render the residents to participate in conflicts over common resources in order to meet their demands. Some of the people who engage in business have moved to urban areas and are unlikely to participate or get entangled in resource based conflicts.

According to Key informants in the Kerio Valley said the community illiterate levels are gradually reducing after government introduction of free basic education.

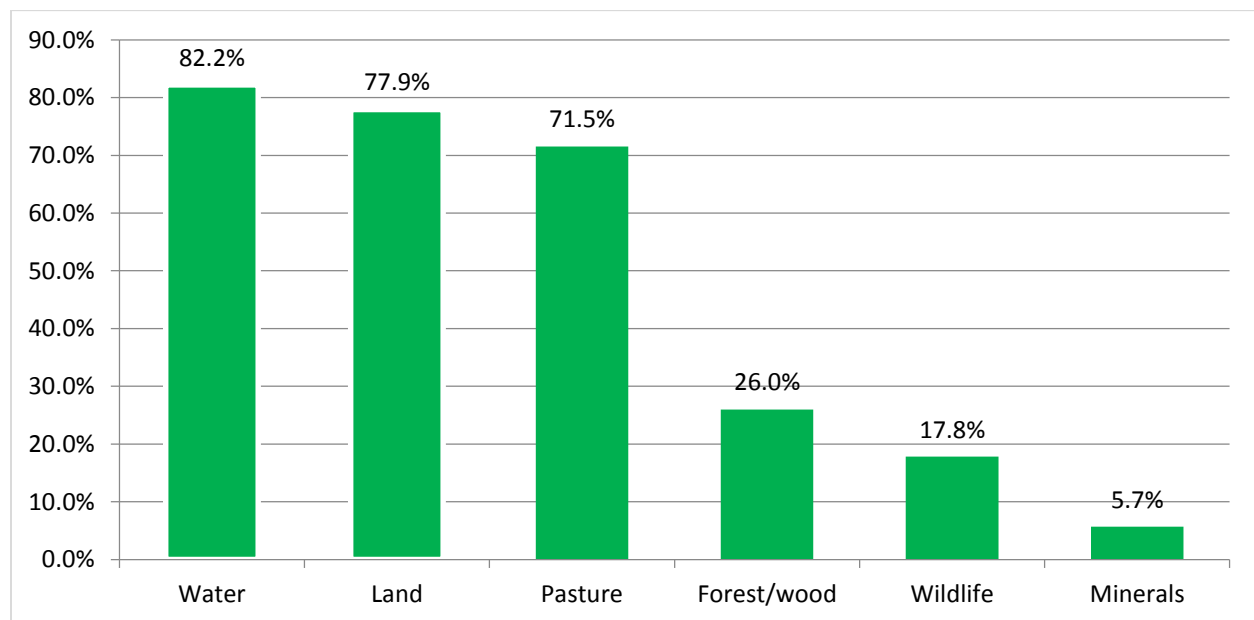
*“Apparently, the community’s acceptance of free education and acquisition of formal education has helped to improve their perception of natural resources values and need for conservation” (KII 2). “However, the members need environmental education to help them conserve the natural resources as well as environment” (KII 3).*

*“The Government ought to educate the community that they are the owners of the natural resources and the Government’s role is to regulate utilization of the natural resource. Although the community views the natural resources as a public good, they get economic benefits by use of various resources”.*

#### **5.4 Natural Resources Critical to Livelihoods of the Households**

As shown in figure 5.1, majority of respondents 231(82.2%), 219(77.9%) and 201(71.5%) said water, land and pasture are critical for their livelihood at time of the study respectively.

**Figure: 5. 1: Natural Resources Critical to Livelihoods of the Households**



**Source: field data.**

Lack to access of water and pastures in Kerio Valley forms basis of conflicts as it involve movement of people and animals to a common resource which after some period of time tragedy of the commons is experienced. The study conforms to (Mwangi 2012) who elaborated that such

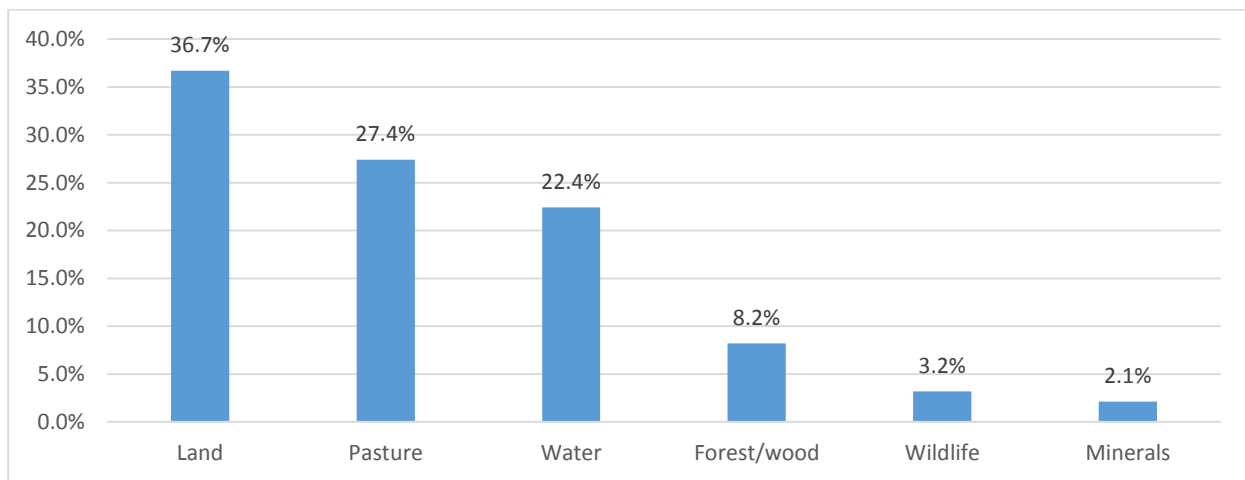


“conglomeration is only feasible for a short period of time and that pressure over the common resource will lead to conflict over it as people will have no incentive to sustainably use the resource but reap more from it at the expense of others”. People will also engage in conflicts so as to protect access to resources like land and pasture.

#### 5.4.1 Natural Resources in Terms of Importance in the Household

On most important natural resources, land 103(36.7%), pasture 77(27.4%) and water 63(22.4%) were of great importance to the household in the study area as shown in figure 5.2.

**Figure: 5.2: Natural Resources in Terms of Importance in the Household.**



*Source: field data*

According to the findings shown in figure 5.2 lands was of greater importance in the household as land issues readily leads itself to violent conflicts. Respondents indicated that land as a resource is an important source of livelihoods and more so an economic status. This findings confirms views by (UNEP 2014), which according to them land forms a central asset of conflict and communities can readily mobilize around it as they link it to their identity, culture and history.

#### 5.4.2 Natural Resources that Lead to Frequent Conflict

Pasture 160(56.9%), land 145(51.6%) and water 136(48.4%) very often lead to frequent conflicts in the Kerio Valley as shown in table 5.3.

**Table 5.3: Natural Resources that Lead to Frequent Conflict**

	<b>Not at all</b>	<b>Rare</b>	<b>Often</b>	<b>Very often</b>
Water	12(4.3%)	18(6.4%)	115(40.9%)	136(48.4%)
Land	6(2.1%)	9(3.2%)	121(43.1%)	145(51.6%)
Pasture	3(1.1%)	7(2.5%)	111(39.5%)	160(56.9%)
Forest/wood	29(10.3%)	97(34.5%)	72(25.6%)	83(29.5%)
Wildlife	37(13.2%)	104(37.0%)	69(24.6%)	71(25.3%)
Minerals	107(38.1%)	73(26.0%)	58(20.6%)	43(15.3%)

**Source: Authors computation**

According to the discussion from the Focus Group Discussion some of the factors that were mentioned to mainly contribute to conflicts were availability of land which is fertile, pasture and water. The frequency of nature based conflicts depends on its availability and perceptions. Access resources such as land, pasture and water is key and essential to livelihoods of the community, without access they become vulnerable, the level of poverty increases and they are not able to accumulate assets. Environmental degradation leads to decline of resources such as water and pastures thus its high frequency of causing conflicts. However, the study established that nature based conflicts can be intervened or resolved through interventions from stakeholders like the government and non-governmental institutions.

According to (Collier 1991), both water and pastures are critical resource variables that should be explored together in that during dry seasons pastures can only be accessed in areas around water points. Other resources like minerals rarely lead to conflict as the communities don't have the knowledge and expertise to prospect it.

#### **5.4.3 Socio-Demographic Characteristics with Frequency of Conflict**

In table 5.4 shows that most respondents between 30-39 years 59(81.9%), married 121(78.6%), with secondary education 56(73.7%) and 138(77.1%) of males perceived that natural resources conflicts occurred frequently at Kerio Valley.

**Table: 5.4: Demographic Characteristics with Frequency of Conflict.**

Characteristics		Often	Rarely	Statistic
Age group	18-29 years	40(71.4%)	16(28.6%)	$\chi^2 = 27.810$ ; df 5 p=0.001
	30-39 years	59(81.9%)	13(18.1%)	
	40-49 years	46(74.2%)	16(25.8%)	
	50-59 years	23(56.1%)	18(43.9%)	
	60-69 years	20(57.1%)	15(42.9%)	
	70 years and above	9(60.0%)	6(40.0%)	
Marital status	Single	60(62.5%)	36(37.5%)	$\chi^2 = 10.097$ ; df 3 p=0.039
	Married	121(78.6%)	33(21.4%)	
	Divorced/Separated	10(50.0%)	10(50.0%)	
	Widowed	6(54.5%)	5(45.5%)	
Level of education	No formal education	40(67.8%)	19(32.2%)	$\chi^2 = 4.035$ ; df 3 p=0.028
	Primary	84(71.8%)	33(28.2%)	
	Secondary	56(73.7%)	20(26.3%)	
	Tertiary	17(58.6%)	12(41.4%)	
Gender	Male	138(77.1%)	41(22.9%)	$\chi^2 = 56.958$ ; df 1 p=0.0001
	Female	59(57.8%)	43(42.2%)	
Religion	Christian	185(70.3%)	78(29.7%)	$\chi^2=9.792$ ; df 1 p=0.020
	Muslim	12(66.7%)	6(33.3%)	

**Source: Authors computation**

Socio demographics have significance as it shapes or determines the kind of livelihood of the community and its stability. A youthful aged person and unemployed forms a demographic structure which is believed to facilitate insurgencies that fuel conflict and when combined with other variables like illiteracy and religion they usually lead to civil strife's.

According to (Henrik, 2011) the challenges that are related to the big youth bulges not only relates to demography but also to some extent the degree to availability of job opportunities of the large youth cohorts existing, education level and them being able to participate in governance. The

above results in table 5.4 show that conflicts are associated with different levels of variables like age and level of education.

### 5.5. Main Actors in the Resource Conflict at Kerio Valley

From the findings, 174(82.9%), 138(79.3%) and 183(75.9%) of the community members indicated that the youths, elders and politicians were very often the main actors of resource conflicts at Kerio Valley.

**Table: 5.5: Main Actors in the Conflict at Kerio Valley with Frequency of Conflict**

Characteristics		Often	Rarely	Statistic
Elders	Yes	138(79.3%)	36(20.7%)	$\chi^2 = 11.820$ ; df 1 p=0.009
	No	59(55.1%)	48(44.9%)	
Youths	Yes	174(82.9%)	36(17.1%)	$\chi^2 = 14.645$ ; df 1 p=0.001
	No	23(32.4%)	48(67.6%)	
Women	Yes	75(54.0%)	64(46.0%)	$\chi^2 = 4.639$ ; df 1 p=0.049
	No	122(85.9%)	20(14.1%)	
Government officials	Yes	156(67.2%)	76(32.8%)	$\chi^2 = 17.031$ ; df 1 p=0.001
	No	41(83.7%)	8(16.3%)	
Religious leaders	Yes	34(32.7%)	70(67.3%)	$\chi^2 = 2.505$ ; df 1 p=0.147
	No	163(92.1%)	14(7.9%)	
Political leaders	Yes	183(75.9%)	58(24.1%)	$\chi^2 = 28.619$ ; df 1 p=0.0001
	No	14(35.0%)	26(65.0%)	
NGOs	Yes	111(75.5%)	36(24.5%)	$\chi^2 = 7.029$ ; df 1 p=0.040
	No	86(64.2%)	48(35.8%)	

**Source: Authors computation**

The findings reveal that elders form part actors of conflict in the Kerio valley, apart from mediation they are also tasked with facilitating good relationship amongst the communities, this formed part of traditional conflict management and resolution mechanism enshrined and based on cultural values of both communities.

According to the study youths were often main actors in that they are used in fueling and taking part as fighters or raiders during conflict, traditionally raids are organized by youths after graduating into manhood with the aim of acquiring livestock which is a way of life for the community and also in replenishing lost animals. Women also had role in the conflict according to the study they rarely participated in conflicts however, a change in household dynamics would occur when the man of the house died as a result of conflict, women would indulge in small entrepreneurship or casual labor so as to meet the demands of her family. This implies that there was change in responsibilities and women became vulnerable.

Besides competition over natural resources, bad politics, weak governance structures and power struggles among the top leadership were mentioned by a good number of informants from the Kerio Valley. Other factors mentioned include: cultural practices (such as livestock raiding and looting of farm produce) and perceived inequalities - in terms of sharing of common opportunities and resources. The informants therefore advocated that there is need for those in and with power (both political and financial) to exercise judicious use their power for the common good.

### **5.5.1 Importance of Illegal Groups in the Resource Conflict at Kerio Valley**

Three quarter 184(75.1%) of the respondents indicated that the bandits and 190(74.8%) of tribal militias were the main illegal groups that often causes resource conflicts at Kerio Valley, however, the study found out that they such groupings are termed as bandits externally but warriors by their own community who are promoted and given full support.

**Table: 5.6: Importance of Illegal Groups in the Resource Conflict at Kerio Valley**

Characteristics		Often	Rarely	Statistic
Bandits	Yes	184(75.1%)	61(24.9%)	$\chi^2 = 19.657$ ; df 1 p=0.0001
	No	13(36.1%)	23(63.9%)	
Tribal militias	Yes	190(74.8%)	64(25.2%)	$\chi^2 = 19.907$ ; df 1 p=0.0001
	No	7(25.9%)	20(74.1%)	

Source: *Authors computation*

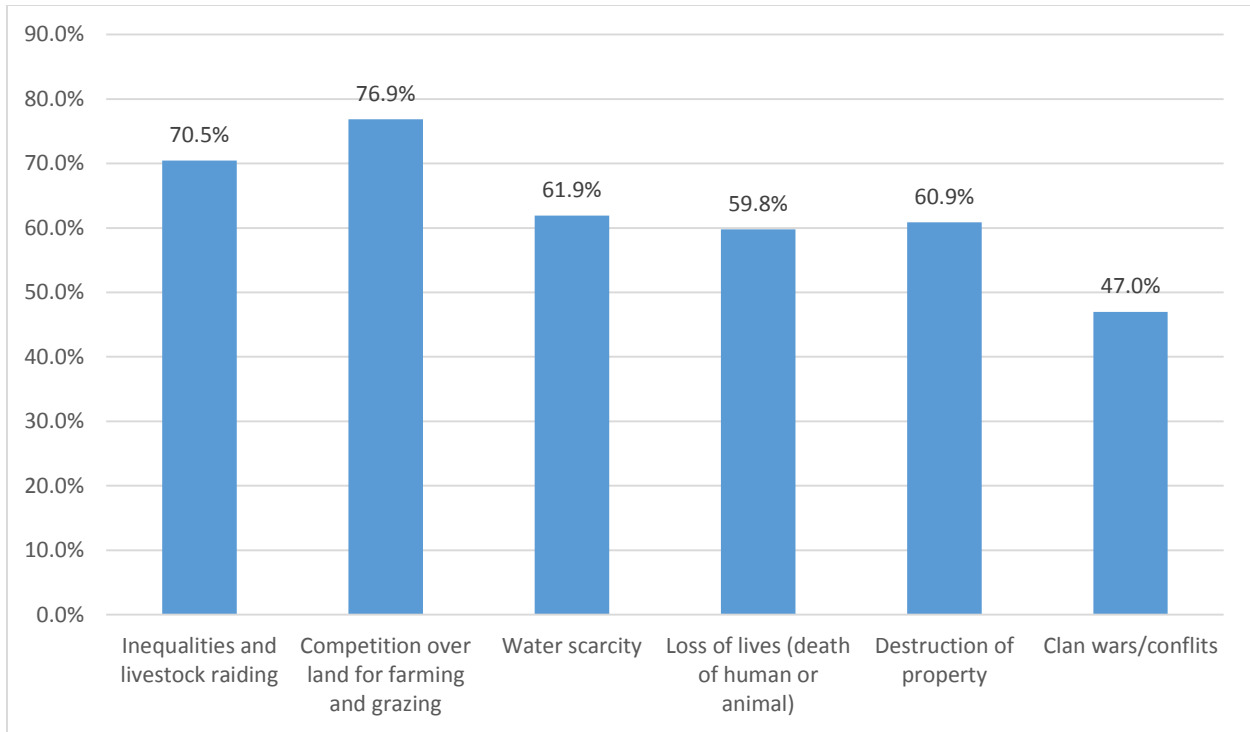
The findings of this study conform to (Robert 2002) who stated that both the militias and bandits form part of conflict existence and persistence amongst communities. Some militias and Bandits are not interested in national politics and governance but rather on self-interests aimed at enriching themselves at the expense of other members of the community and they do so by undermining the existing institutional structures.

The findings in table 5.6 conforms with Bernett *et al* (2006) where he stated that militias and Bandits may fuel conflicts as a result of assistance from external conflicts actors who fund them because of their interests. Due to different ethnic formation and social identity both the militias and bandits of different communities have rivalry which fuels or leads to conflict.

### **5.5.2 Role Played by Actors in the Resource Conflict at Kerio Valley**

Majority of the respondents 216(76.9%) from Kerio Valley were of the opinion that natural resource-based conflict is mainly manifested through competition over land for farming and grazing. However, a few of the respondents 132(47.0%) were of the opinion that Clan wars/conflicts were the main form in which such conflicts are manifested. The findings are presented in Figure 5.3

**Figure: 5.3: Role Played by Actors in the Resource Conflict at Kerio Valley**



*Source: field data*

In line with this issue, majority of the discussants and informants - especially the women, scholars, local administrators and NGOs - were of the opinion that the effects caused as a result of conflicts of natural resources were mostly negative. This is because according to these groups, natural resource- based conflict brings about loss of lives, loss of livelihoods, loss of animals, displacement of people or even entire communities, and mortal injuries on the survivors. In particular, most of the women said that when conflicts related to natural resources occur, the children, elderly and their fellow women suffer most since they are more vulnerable to attacks, sexual violence (e.g., rape) and malnutrition.

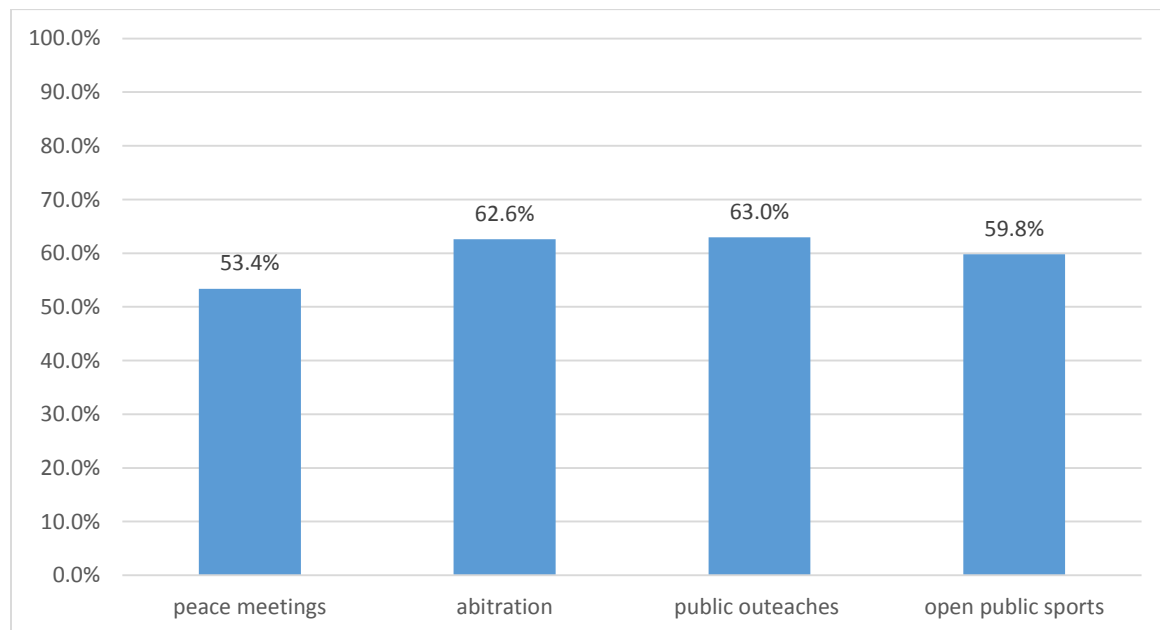
This findings in figure 5.3 are in line with Huho, (2015), which teaches that over-exploitation or abuse of natural resources can lead to serious environmental changes and implications - such as loss of human and animal lives; land and water degradation; increased levels of pollution; illegal over utilization of forests and fauna; deforestation; climatic change; and displacement of peoples and communities. The findings also concur with the views of Herdiansyah *et al.*, (2014) who maintains that the ever-increasing demand for accessibility and use of natural resources can have

multiple social and economic effects on communities, which will in turn affect people's livelihoods, economic growth and technological advancement.

In addition, Burnley, (2011) observed that natural resource-based conflicts have more devastating effects at community and family levels than even at national or international levels: this is because according to Burnley, (2011), any environmental degradation practices affect communities or families first, and in a more direct manner. He also observes that it takes time to mobilize and distribute critical help needed to deal with effects of natural resource-based conflicts down at the family level. However, in line with the issue of whether natural resource-based conflicts have positive or negative effects on communities and families, a small number of the informants said that natural resource-based conflict has had 'positive' effects in the lives of the residents of Kerio Valley. According to them, this is because such conflicts have led to the following: an awakening the need for peace and more sustainable peace efforts among the masses who have witnessed long periods of conflicts; the existence of donor funding and other forms of donor aid; and the constant search for better opportunities due to displacement.

### 5.5.3 Role Played by Actors in the Resolution of Resource Conflict at Kerio Valley

**Figure: 5.4: Role Played by Actors in the Resolution of Resource Conflict at Kerio**



*Valley Source: field data*



According to the findings in Figure 5.4 with regard to resolution of conflicts, 177(63.0%) of the respondents indicated that introducing community outreaches had been very effective in addressing conflict related to natural resources, 176(62.6%) indicated that arbitration and resolution of disputes had been effective and 168(59.8%) indicated that since introduction of peace sports had gradually reduced natural resources conflicts.

Most key informants and discussants said that they are aware of the existence of some natural resource-based conflict resolution mechanisms mentioned peace sports, third-party mediation efforts, arbitration (through the courts) and other peace meetings organized by various parties such as community based organizations, NGOs and religious groups are some of the main mechanisms used in resolving natural resource-based conflict. These findings are in line with the view held by Gakuria, (2013) that apart from having local councils and committees, non-governmental organizations (i.e., NGOs, CBOs and faith-based actors) have provided financial, psychological, emotional and spiritual support to war affected communities, and promoted reconciliation and re-integration. Thus, the non-state initiatives and institutions have formed the foundation upon which the local conflicts have been addressed especially by local governments and communities.

UNEP, (2014) also reported that the civil society organizations have also been in the fore front in promoting reconciliations and dialogue among warring communities; they have also provided early warning to relevant authorities before outbreak of conflict.

#### **5.5.4 Correlation between Role of Actors and Frequency of Conflict**

The correlation between role of actors in natural resources conflicts and frequency of conflicts was determined using Pearson correlation coefficient. The rationale behind this analysis was to determine the strength and direction of the relationship between the role of actors and the frequency to which a conflict arises. According to Kothari (2003) a correlation coefficient of 1 means perfect positive relationship while a correlation coefficient of -1 means perfect negative relation and correlation coefficient of 0 means that there is no relationship. The judgment rule of the strength of the relationship was informed by the guidelines stipulated by Field (2013) who suggested that an r value of 0.10 to 0.29 implies weak correlation while an r value of 0.3 to 0.49 indicates a moderate correlation. Finally, an r value of 0.5 to 1 demonstrates a strong relationship.

According to findings in table 5.7,  $r=0.615$ . This means that there is a positive correlation between role of actors in natural resources conflicts and frequency of conflicts. The correlation is also statistically significant since  $p=0.001 < 0.05$ .

**Table 5.7: Correlation between Role of Property and Frequency of Conflict**

		Role of actors in conflicts	Frequency of conflicts
Role of actors in conflicts	Pearson Correlation	1	0.615**
	Sig. (2-tailed)		0.001
	N	281	281
Frequency of Conflict	Pearson Correlation	0.615**	1
	Sig. (2-tailed)	0.001	
	N	281	281

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Source: Authors computation**

### **5.6 Injuries, loss of life and other losses incurred in Natural resource conflict at K**

From the findings shown in table 5.8, 128(45.6%) of the respondents indicated that members of their families were injured or died out of the natural resources conflict in the region while 153(54.4%) of the community members indicated that none of their family members were injured or died out of the natural resources conflict in the region. According to the findings, 225(80.1%) of the community members indicated that they had lost livestock, granary stock or property to natural resources conflict while 56(19.9%) indicated that they had not. This shows that most of the community members indicated that they had lost any livestock, granary stock or property to raids or conflict.

**Table 5.8: Long- and Short-Term Effects of Natural Resource Conflict.**

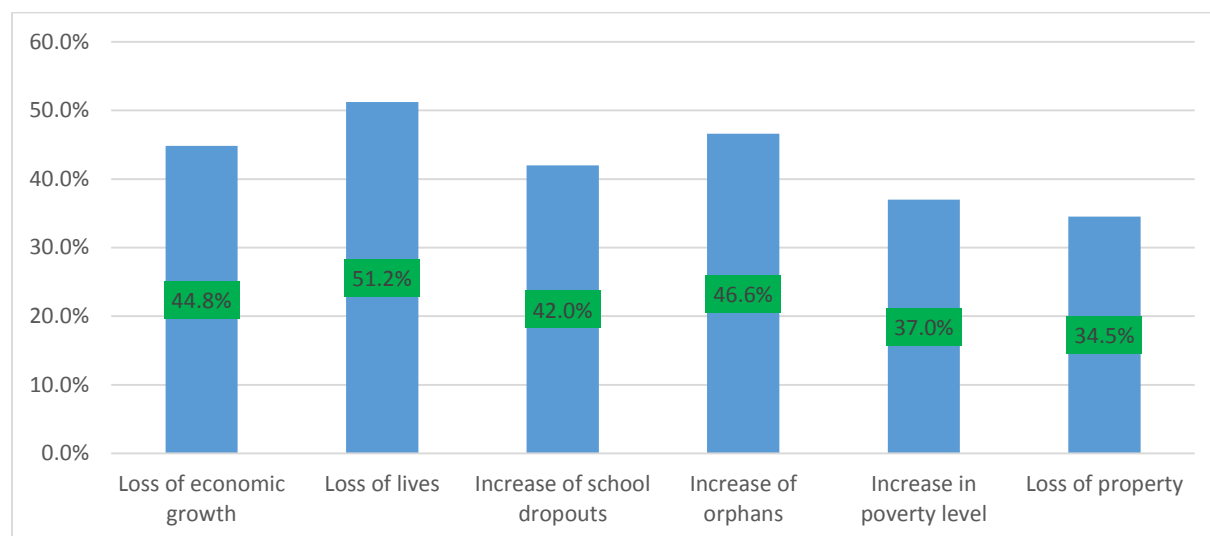
<b>Characteristics</b>	<b>Frequency</b>	<b>Percent</b>
<b>Family Injuries and loss of life</b>		
Yes	128	45.6%
No	153	54.4%
<b>Livestock loss and property raids</b>		
Yes	225	80.1%
No	56	19.9%

**Source: Authors computation**

According to most of the discussants and key informants, many natural resources conflicts take place either within members of the same community (clan), or among members of two or more different clans. The informants said that when conflicts take place among members of different clans, they are normally brutal and deadly, where human and animal lives are lost. This is because when such conflicts occur, they are normally of a retaliatory nature, where one clan wants to seek revenge on the other clan for animals stolen or lives lost. These findings are in line with those of Opiyo *et al.*, (2012) who hold that conflicts can be categorized into two levels, i.e., micro-micro or micro-macro levels: micro-micro conflicts are those that occur within community groups, while micro-macro conflicts are those that occur between community groups and government, private or civil society organizations.

Slightly less than half of respondents 101(44.9%) reported to have lost 1-10 animals and 36(16.0%) lost movable properties. Most 194(69.0%) of the respondents indicated that they did lose access to grazing lands as a result of natural resources conflict. As well, 187(66.5%) indicated that they had lost access to the farmland due to natural resources conflict while 139(49.5%) lost access to wells. This shows that most of the respondents indicated that they lost access to grazing lands as a result of natural resources conflict. Further, most of the community members indicated that they lost access to farmland and wells due to conflicts.

Loss of lives (51.2%), increases in the number of orphans (46.6%), loss of economic growth (44.8%), increases in level of poverty (37.0%) and loss of property (34.5%) are major impacts associated with natural resources conflicts.



**Figure 5.5: Impact of Natural Resource Conflict in the Region.**

**Source: Field data**

This findings as shown in figure 5.5 also confirm the views of Makutsa, (2010), who maintain that micro- conflicts can be further categorized as taking place either within the group directly involved in resource management regime (i.e., intra micro-micro conflict) or between this group and those not directly involved (i.e., inter micro-micro conflict). Similarly, according to Lokiyo, (2014), intra micro-micro conflicts mainly include: disputes over land and resource ownership - for instance, between private and communal land owners; disputes over land boundaries between individuals or groups; latent family and relationship disputes; disputes due to natural resource projects being captured by elites and/or those who happen to own resources of a higher quality; breaking of operational rules - such as protection agreements for grazing areas, fish net sizes, forests or misappropriation of funds; and disputes over the unfair distribution of work and profits. Conflict between indigenous groups and more recent settlers; disputes generated by jealousy related to growing wealth disparities; lack of co-operation between different communities and groups; disputes over renewal arrangements for leased land; internal land ownership disputes ignited by the speculation activities of commercial companies; and resentment built up due to lack of

representation on village committees. Besides clan wars/conflicts, destruction of property, raiding of livestock/farm produce, displacement of families and loss of lives (deaths).

### 5.6.1 Correlation between Loss of Property and Frequency of Conflict

According to findings in table 5.9,  $r=0.464$ . This means that there is a positive correlation between loss of property during natural resources conflicts and frequency of conflicts. The correlation is also statistically significant since  $p=0.01 < 0.05$ .

**Table 5.9: Correlation between Loss of Property and Frequency of Conflict.**

		Loss of property	Frequency of conflicts
Loss of property	Pearson Correlation	1	0.464**
	Sig. (2-tailed)		0.01
	N	281	281
Frequency of Conflict	Pearson Correlation	0.464**	1
	Sig. (2-tailed)	0.01	
	N	281	281

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Source: Authors computation*

### 5.6.2 Effectiveness of Institutions in Resolving Conflicts

The findings shown in table 5.10, 139(49.5%), 124(44.1%), 159(56.6%) of the respondents indicated that the local Peace Committee, Government, Religious organizations and 127(45.2%) of NGOs (local/international) were effective in resolving conflict respectively.

**Table 5.10: Effectiveness of Institutions in Resolving Conflicts.**

	Not effective	Effective	Very effective
Local Peace Committee	74(26.3%)	139(49.5%)	68(24.2%)
Government	82(29.2%)	124(44.1%)	75(26.7%)
Religious organizations	76(27.0%)	159(56.6%)	46(16.4%)
NGOs (local/international)	115(40.9%)	127(45.2%)	39(13.9%)

*Source: Authors computation*

In the Focus Group Discussion, discussants said that the mechanisms being used currently to resolve natural resource conflicts have not been effective and maintained that this is the case since most of the implementers of these mechanisms are highly biased and, therefore, these mechanisms only exist to serve the interests of a few within the clan or the community; and in their opinion, that was perhaps the main reason why fighting and other forms of conflicts are still rampant in the Kerio Valley. These findings are in line with Nindi *et al.*, (2014), which maintained that a problem in many countries in using formal conflict resolution mechanisms for natural resource conflicts (such as courts) is that such mechanisms are mostly weak or non-existent. In addition, many formal court systems are severely overburdened, with insufficient capacity in terms of personnel and expertise to handle a huge number of cases that come before them (Ahmad, 2015). Similarly, due to bureaucratic hassles inherent in the judicial system, it is often difficult to resolve such conflicts quickly. Consequently, natural resource conflicts such as land cases can languish in courts for many years; also, the fact that property documents are easily forged and corruption is rampant in the system poses another challenge to the judiciary (Mwanika, 2010). Furthermore, for many ordinary people, the courts appear expensive, time-consuming, unpredictable and, even corrupt in themselves; the language of lawyers and judge also appears alien and complex (Kipkemoi, 2017).

### 5.6.3 Strategies to Promote Peace and Development

Table 6.13 shows that 139(49.5%) and 113(40.2%) of respondents said fodder provision in dry seasons and increasing number of boreholes in Kerio Valley promotes peace and development

**Table 5.11: Strategies to Promote Peace and Development.**

	Frequency	Percent
Promotion of employment	92	32.7%
Disarmament	73	26.0%
Start joint economic activities of women/youth groups	44	15.7%
Building of dams or boreholes	113	40.2%
Education	54	19.2%
Fodder provision in dry seasons	139	49.5%

**Source: Authors computation**

### 5.6.4 Correlation between Effectiveness of Institution and Frequency of Conflict

According to findings in table 6.11,  $r=0.367$ . This means that there is a positive correlation between effectiveness of institution during natural resources conflicts and frequency of conflicts. The correlation is also statistically significant since  $p=0.01 < 0.05$ .

**Table 5.12: Correlation between Effectiveness of Institution and Frequency of Conflict.**

		Effectiveness of institution	Frequency of Conflict
Effectiveness of institution	Pearson Correlation	1	0.367**
	Sig. (2-tailed)		0.001
	N	281	281
Frequency of Conflict	Pearson Correlation	0.367**	1
	Sig. (2-tailed)	0.001	
	N	281	281

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Source: Authors computation**

### 5.7 Hypothesis Testing

Results in Table 6.12 show that  $R=0.367$  which means that access to natural resources and frequency of conflicts has a moderate influence on natural resource conflicts; The Durbin-Watson test is 1.559 which is closer to 2 hence there is no autocorrelation. The F ratio was significant in view of the fact that  $F(1, 280) = 28.309$ ,  $p=0.001 < 0.05$ . This indicates that there was a statistically significant influence of access to natural resources and frequency of conflicts. From these findings the null hypothesis was not accepted leading to the conclusion that there is need to resolve natural resource conflicts in order to develop the region.

*Table: 5.13: Hypothesis Testing.*

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Durbin-Watson</b>	<b>Coefficient B</b>	<b>Std. Error</b>
<b>Summaries</b>	0.367	0.135	1.559		
(Constant)				2.78	0.176
Frequency of conflicts				0.253	0.048
F (1, 280) =28.309, p=0.001<0.05					
a. Dependent variable: Access to natural resources					
b. Predictors: Frequency of conflicts					

*Source: Authors computation*



## **CHAPTER SIX: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 Introduction**

.This chapter presents the summary of the research findings, conclusions and recommendations. The summary of the findings and the conclusions drawn out of these findings are organized around the main objectives of the study.

### **6.2 Summary of findings**

#### **6.2.1 Main Actors involved in conflict and to their Role**

The first objective of the study sought to find out and identify the actors involved in conflict and determine what role they play. From the findings presented in Table 5.4. the study established that elders from part of internal actors of conflict in the valley, they are mainly individuals who are highly respected and have close affiliations to the communities, their main role as per the study is act as mediators for they are knowledgeable and understand both the communal, cultural and interpersonal dynamics which are very crucial in formulating resolutions. Another role of elders is that they are tasked with provision of good relations that are aimed at widening accessibility of resources and promote security between the Marakwets and Pokots. However the study also found out that some of the elders in Kerio Valley promote conflicts so as to acquire access to natural resources for their own benefit.

Youths also play a greater role in conflicts, based on the study youths were often main actors in that they are used in fueling and taking part as fighters or raiders during conflict. Women role in the conflict according to the study rarely participated in conflicts however they majorly form part of conflict resolution and are known to discourage conflicts.

Another actor who often participated in conflict is NGOs and the civil societies and according to the respondents both end up having an affection or biased attitude for local groups and through discrimination they end up funding activities that promote conflict in the valley.

There have been rising interests from governments, donors and non-government organizations (NGOs) regarding natural resource projects is developing within three distinctive areas of international development: poverty reduction; peace-building; and biodiversity conservation (Bavinck, Pellegrini, & Mostert, 2017).

The study also found out that despite devolution both the central and county governments have not fully indulged in efforts regarding to their role of conflict resolution in Kerio valley region. There is no security guarantee in the region due to fewer security personnel, the existence of Kenya police reservist is ineffective as they are not adequate in number and have inferior ammunitions, and sometime the inactive state of government in some regions in the valley end up being perceived as deliberate discrimination and neglect as conflicts persists.

### **6.2.2 Drivers of the Marakwet-Pokot Conflict over Natural Resource in Kerio Valley**

The study established that according to most of the respondents, the use of water, land for farming and pasture were critical for their livelihood and were most important natural resources in their household as shown in figure 5.1. Further, they were characterized by frequent conflicts in the region. According to the United Nations Security Council, there are many and varied resource conflicts globally available to discuss. The resource use conflicts include domestic conflicts, territorial disputes and interstate conflicts. Additionally, in today's global resource conflicts, the resources involved are also diverse ranging from land, to water to forest (Baqe, 2013). The instances of global resource use conflicts merit the focus of Security Council and are simply the most pressing in the international relations perception today (UNEP, 2014).

The use of natural resources was characterized by conflict in the Kerio Valley. The conflict was a result of conflicting land use practiced in the Pokot-Marakwet border where some community believed in communal land system while the farmers advocate for land adjudication of individual free holds. The other sources of conflict in the area were lack of access to water system as one community tends to encroach river banks/ river line land hence hindering to accessibility to the water. Community claim that being in control one has to own the land one lives on, which in turn conforms to their sedentary farming livelihood (Ayoo, 2010).

In addition, politics cause conflict, for instance, most of conflict in Kerio Valley are related to political pressures in the region. In an anarchistic global infrastructure of countries, the underlying cause of conflicts is centered on the control and acquisition of resources, and their resultant connections to political and economic international power. Every so often, these resource conflicts are parodied to be caused by the aforementioned qualities, but it is now an established fact that resource acquisition is now a decisive component of military conflict and geostrategic planning, and that such wars were driven by the need to have access to the particular resources involved (Njeri, 2015).

### **6.2.3 Effects of the Marakwet –Pokot Conflict over Natural Resources**

The study established that death and injuries as result of fighting for water and pasture are a cost to households, for they interfere with the flow and allocation of resources for subsistence, and have high chances of initiating new conflicts in the form of revenge.

Casualties arise also result from conflicts. When conflicts arise many people are usually left dead and some seriously injured. **Table 5.8** illustrates the total number of conflict casualties and livestock lost, most of the community member's respondent that their family members were injured or died out of the conflict in the region. Poverty rates are high and infrastructure is virtually non-existent. The perceived inactiveness of the government by the communities in the region has led to a general feeling of insecurity which has led to people arming themselves (Gakuria, 2013). This is what has led to the loss of life in large numbers whenever conflicts occur. The continued existence of these conflicts points to a failure by responsible government institutions to address issues in the Kerio Valley and some government officials officiate peace process with personal interests which are the basis of the tensions and attacks which left more peoples mainly women and children to lose their lives (Chege & Wairuri, 2016).

### **6.2.4 Mechanisms and strategies used to manage natural resource based conflicts.**

The study established that communities have adopted different mechanisms that are aimed at reducing conflicts such modes includes; negotiation, mediation and avoidance of conflicts, however most of the respondents claimed that the course of action undertaken was based on preferences and its perceived success likelihood in the valley. The study also established that

initiations of projects like opening up of markets like cheseon in Kerio valley has been found to offer significant means of addressing many of the needs and concerns that fuel resource related conflicts in the region. . The study also found out that provision of alternative sources of resources at dire times of the year will be effective in preventing the occurrence of conflicts in the area.

The study found out that the challenges involved in the implementation of the strategies of solving conflicts included the following: limited institutional capacity, policies imposed without local participation and presence of political interference.

Natural resource policies and interventions are often formulated without the active and sustained participation of communities and local resource users. For example, some governments have long relied on centralized management strategies based on centralized control by administrative units and technical experts. These policies and practices frequently fail to take into account local rights to, and practices regarding, natural resources. For example, the introduction of new policies and interventions without local input may end up supplanting, under-mining or eroding community institutions governing resource use.

### **6.3 Conclusions**

The study established that youths, elders and politicians were very often the main actors of resource conflicts at Kerio Valley. The government officials also were actors in the conflict in that government official have been involved in dirty politics instigating conflict in the region. From the findings, it is clear that the use of water, land and pasture were characterized by frequent conflicts in the Kerio Valley. The study therefore concludes that lack of mutual understanding in the region between communities about how to share the natural resources is the overall cause of conflict. Further, the study found out that politics also played a role in the fueling the conflict in the region.

The study established that for most of the community members their family members were injured or died, lost livestock, granary stock or property and lost access to grazing land and farmland as well as water sources due to natural resources conflicts. This loss by community members was in form of 1-10 animals and granary stocks due to conflict.

The many actors in the conflict are government related institutions and therefore the solutions must be government-led. The study concludes that Traditional Peace Committee, government institutions (e.g. police service), religious organizations and NGOs (local/international) were effective in resolving conflict. The study also found out that provision of alternatives during dry seasons, increasing number of boreholes in Kerio Valley, starting joint economic activities of women/youth groups, disarming warriors, education and that promotion of employment would be effective in preventing the occurrence of conflicts in general.

#### **6.4 Recommendations**

On the basis of the above conclusions, this study makes the following recommendations-

1. The central government and county governments should take lead to guide other stakeholders sustaining the conflict reduction brought about by natural resources. This can be achieved by consistently creating fora for stakeholder engagement. Through such forums, conflictual issues will be addressed and right information passed.
2. Legal pluralism should be addressed with the assistance of competent bodies. These include the Ministry in charge of natural resources. For instance, the management of Kerio Valley ecosystem should be delineated and boundaries clarified with respect to jurisdictional mandates.
3. Better leadership and management in international efforts to resolve disputes could help to address some of the problems of weak coordination and inconsistent action described above. The government should offer funds to the council of elders to show them that the government supports the work they are doing. The government should also ascertain that its officials do not practice political incitements that result into conflict. This can be done by taking strict measures to those politicians that will engage in any activity tantamount to inciting the public.

#### **6.5 Recommendation for Further Studies**

1. Similar studies should be conducted in other parts of the country to find out the extent to which natural resources conflicts affect livelihoods and how they can be minimized in order to improve community standard of living.
2. Further research should be carried out to help formulate community-based guidelines for protection and prescribe measures for integrated natural resource management.

## REFERENCES

- Ahmad, M. (2015). Natural Resource Conflicts In Afghanistan. *The Economics of Global Environmental Change*, 45(18), 724–731.
- Anne, O. (2017). A Critical Analysis of Natural Resource Management in the Conflict Zones: a Case Study of the Democratic Republic of Congo. *Journal of African Conflicts and Peace Studies*. Retrieved from [http://erepository.uonbi.ac.ke/bitstream/handle/11295/102321/Ouko\\_A critical analysis of natural resource management.pdf?sequence=1&isAllowed=y](http://erepository.uonbi.ac.ke/bitstream/handle/11295/102321/Ouko_A_critical_analysis_of_natural_resource_management.pdf?sequence=1&isAllowed=y)
- Annegret Mahler , Miriam Shabafrouz, G.S. (2011). Conflict Prevention through Natural Resource.
- Ayoo, C. (2010). Community-based natural resource management in Kenya. *Management of Environmental Quality: An International Journal*, 18(5), pp.531-541. <https://doi.org/10.1108/14777830710778292>
- Baqe, P. D. (2013). An Investigation Into Conflict Dynamics In Northern Kenya: A Case Study Of Marsabit County 1994-2012. *The Economics of Global Environmental Change*, 11(11), 340–378.
- Bavinck, M., Pellegrini, L., & Mostert, E. (2017). Conflicts over Natural Resources in the Global South – Conceptual Approaches. *CRC Press*, 91(54), 399–404.
- Bayramov, A. (2018). Review: Dubious nexus between natural resources and conflict. *Journal of Eurasian Studies*, 9(1), 72–81. <https://doi.org/10.1016/j.euras.2017.12.006>
- Rubin, Barnett R. (2006) Central Asia and Central Africa: Transnational Wars and Ethnic Conflicts. *Journal of Human Development*, 7, pp. 5–22
- Bob, U., & Bronkhorst, S. (2011). Environmental conflicts: Key issues and management implications. *African Journal on Conflict Resolution*, 10(2), 9–30. <https://doi.org/10.4314/ajcr.v10i2.63307>
- Bond, J. (2014). A holistic approach to natural resource conflict : The case of Laikipia. *Journal of Rural Studies*, 34(18), 117–127. <https://doi.org/10.1016/j.jrurstud.2014.01.008>
- Burnley, C. (2011). Natural Resources Conflict in the Democratic Republic of the Congo: A Question of Governance? *Sustainable Development Law & Policy*, 12(1), 7–11. Retrieved from <http://digitalcommons.wcl.american.edu/sdlp>
- Castro, P., & Nielson, E. (2013). Natural resource conflict management case studies: an analysis of power, participation and protected areas. *Journal of African Conflicts and Peace Studies*.
- Chege, S., & Wairuri. (2016). Dynamics Of Conflict In Decentralised Forest Management In Mount Kenya Forest. *Journal of Environmental Policy and Planning*, 5(4), 379–396.

- Cheserek, G.J. (2007). *Resource use Conflict Between Agro-pastoral Communities in Kenya*. Unpublished thesis, Moi University Eldoret.
- Chirchir, J. K. C. and W. (2018). Learning from Indigenous Communities Peace Pact in Sub-Saharan Africa: An Analysis of the Keiyo — Tugen (KETU), Kenya. *Moi University Press*, 9(4), 18–79.
- Collier, P. (1999). On the Economic Consequence of Civil War. *Oxford Economic Paper* 51 (11).
- County Government (2017). ELgeyo Marakwet County CIDP 2 (2018) Popular Version Compressed.
- Cresswell, J.W.(2003). *Research Design: Qualitative , Quantitative Approaches and Mixed Method Approaches* . Carlifornia . SAGE publications .inc.
- Effah, G. (2014). Assessing Natural Resource Use Conflicts In The Kogyae Strict Nature Reserve, Ghana. *Landscape and Urban Planning*, 20(10), 178–185.
- Elfversson, E. (2016). Rule , religion and ritual : Governance and peacebuilding in Kerio Valley , Kenya. *Peace and Conflict*, 20(14), 541–549.
- Fetherston, A. B. (2011). Peacekeeping, conflict resolution and peacebuilding: A reconsideration of theoretical frameworks. *International Journal of Phytoremediation*, 7(1), 190–218. <https://doi.org/10.1080/13533310008413825>.
- Field A, & Jeremy M (2013). *Discovering statistics Using SAS. A primer , Fifth Edition* .
- Fisher, E. (2017). Conflict And Cooperation Over Natural Resources In Developing Countries. *Whiteknights Campus*, 10(6), 2016–2028. <https://doi.org/10.13140/RG.2.2.24786.25282>
- Gakuria, A. (2013). Natural Resource Based Conflict Among Pastoralist Communities in Kenya. *Jounral of Defense Resources Management*, 32(16), 187–209.
- Green, B. (2015). A General Model of Natural Resource Conflicts : the Case of International Freshwater Disputes. *The Modern Library*, 37(3), 227–248.
- Hanshi, N. (2017). An Analysis Of Local Dynamics In Conflicts Over Use Of Natural Resources In The Tana Delta Region, Tana River County, Kenya. *Journal of African Conflicts and Peace Studies*, 67(44).
- Herdiansyah, H., Soepandji, B. S., Seda, F. S., & Dewi, O. (2014). Conflict Management of Renewable Natural Resources in the Border of Indonesia-Malaysia: Sustainable Environmental Approach. *Procedia Environmental Sciences*, 20(12), 444–450. <https://doi.org/10.1016/j.proenv.2014.03.056>
- Henrik, U.(2011) Demography and Armed Conflict: Assesing the Role of Population Growth and Youth Bulges *University of Leuven*.

- Huho, J. (2015). Conflict Resolution Among Pastoral Communities in West Pokot County, Kenya: a Missing Link. *Academic Research International*, 33(23), 2223–2231. Retrieved from [www.savap.org.pk](http://www.savap.org.pk)
- Idrissou, L., & Aarts, N. (2018). Understanding Conflict's Dynamics in Participatory Natural Resources Management: a Critical Review. *European Journal of Business and Social Sciences*, 6(10), 24–40. Retrieved from <http://hdl.handle.net/2066/184330> URL: <http://www.ejbss.com/recent.aspx-> /URL: <http://www.ejbss.com/recent.aspx->
- Kemunto, O. G. (2016). Analysis Of Conflicts And Development Of A Potential Management Mechanism In The Kenyan Forest Sector. *Ecology and Society*, 18(4), 17–30.
- Kipkemoi, S. (2017). Natural Resource Based Conflicts In Tana River County, Kenya. *International Academic Journal of Social Sciences and Education*, 1(5), 47–57.
- Kipkorir, B. E (1973). *The Marakwet of Kenya: A Preliminary Study*. Nairobi E.A.L Bureau.
- Kothari, C.R. (2004). *Research Methodology. Methods and Techniques*. New Delhi: New Age International (p) Limited.
- Larisa, & Guerrero, L. (2013). In What Ways Do Natural Resources Influence The Dynamics Of Armed Conflict? *The Economics of Global Environmental Change*.
- Le Billion, p.(2001). The Political Ecology of War: Natural Resources and Armed Conflict. *Political Geography* 20, PP 561-584.
- 
- Lokiyo, E. L. (2014). Trans Border Conflict Between the Turkana and Pokot in Kainuk and Alale Divisions , Kenya : *Peace and Conflict*, 45(87), 995–1008.
- Mähle, A., Shabafrouz, M., & Strüver, G. (2011). Conflict Prevention through Natural Resource Management? A Comparative Study. *GIGA Research Programme: Violence and Security*, 220(158), 5364–5387.
- Makutsa, P. W. (2010). An evaluation of the policy framework for community based natural resource management in Kenya. *Law, Environment and Development Journal*, 15(9), 130–142.
- Mason, S. A., & Muller, A. (2017). Transforming Environmental and Natural Resource Use Conflicts. *The Economics of Global Environmental Change*, 34(16), 225–272. Retrieved from [http://www.e-elgar.co.uk/bookentry\\_main.lasso?id=12546](http://www.e-elgar.co.uk/bookentry_main.lasso?id=12546)
- Mohammed, Y. S. (2015). Forms Of Natural Resource-Based Conflict And Conflict Resolution Mechanisms: A Case Of Beledweyne District, Hiiran Region - Somalia. *United State Institute of Peace*, 20(11), 124–134.



- Muigua, K. (2012). Devolution and Natural Resource Management in Kenya. *Natural Resource Perspectives*, 1(76), 1–6.
- Muigua, K. (2018). Managing Transboundary Natural Resources in Kenya. *Journal of Natural Resources and Life Sciences Education*, 32(20), 107–117.
- Murzakulova, A. (2017). Natural Resource Management Dynamics In Border Communities Of Kyrgyzstan And Tajikistan. Research Report. *Academic Research International*, 8(11), 98–109.
- Mwanika, P. A. N. (2010a). Natural Resources Conflict; Management Processes and Strategies in Africa. *Make Peace*, (September).
- Mwanika, P. A. N. (2010b). Natural Resources Conflict; Management Processes and Strategies in Africa. *Make Peace*, 19(9), 13–25.
- Nduta, R. W., & Shisia, A. (2017). Challenges Facing Public Resources Management of Devolved Governments in Kenya : a Case of Machakos County. *Journal of Environmental Protection*, 5(9), 388–409.
- Nindi, S. J., Maliti, H., Bakari, S., Kija, H., & Machoke, M. (2014). Conflicts Over Land And Water Resources In The Kilombero Valley Floodplain, Tanzania. *African Study Monographs*, 50(10), 173–190.
- Njeri, G. B. (2015). Environmental conflict and national security in Kenya : Case study of Turkana community. *Journal of Forest and Livelihood*, 69(10), 566–573.
- Opiyo, F. E. O., Wasonga, O. V, Schilling, J., & Mureithi, S. M. (2012). Resource-based conflicts in drought-prone North- western Kenya : The drivers and mitigation mechanisms. *Wudpecker Journal of Agricultural Research*, 17(12), 442–453.
- Peter, E., Kent, S., & Parkinson, J. (2015). Addressing Natural Resource Conflicts Working Towards More Effective Resolution of National and Sub-National Resource Disputes. *Wall Street Journal, New York.*, 25(6), 1324–1332.
- Planning, I., & Development, E. (2018). *Kerio valley development authority 2014 – 2018*.
- Sullivan A & Sheffrin, S. (2011). *Economics Principle in Action*. New Jersey, Pearson Prince Hall.
- Ratner, B. D., Meinzen-Dick, R., Hellin, J., Mapedza, E., Unruh, J., Veening, W., ... Bruch, C. (2017). Addressing conflict through collective action in natural resource management. *International Journal of the Commons*, 11(2), 877–906. <https://doi.org/10.18352/ijc.768>
- Rus, H. (2015). Corruption , Conflict and the Management of Natural Resources. *Economics and Political Science*, 39(21), 451–459.

- Theodore, O. (2017). Management of transboundary natural resources. *Journal of Law and Conflict Resolution*, 9(4), 42–52. <https://doi.org/10.5897/JLCR2016.0266>
- Tisdell, C. W. and C. (2013). Conflicts Over Natural Resources and the Environment: Economics and Security. *The University Of Queensland*, 100(86), 12–31.
- Tyler, S. (2016). Policy Implications of Natural Resource Conflict Management. *Ateneo de Manila University Press*, 13(7), 88–96.
- UNEP. (2014). Natural Resources and Conflict; A Guide for Mediation Practitioners. *United Nations Department of Political Affairs and United Nations Environment Programme*, 1(1), 1–100.
- Upreti, B. R. (2011). Conflict Management in Natural Resources: A Study of Land, Water and Forest Conflicts in Nepal. *Wall Street Journal, New York.*, 12(8), 100–118.
- Vanessa, M. (2018). Natural Resource Management Framework as a Conflict Management Strategy in Kenya: a Case Study of Laikipia County. *African Energy Policy Research Network*, 9(3), 111–167.
- Varisco, A. E. (2013). A Study on the Inter-Relation between Armed Conflict and Natural Resources and its Implications for Conflict Resolution and Peacebuilding. *Journal of Peace, Conflict and Development*, (14), 38–58. Retrieved from <http://www.bradford.ac.uk/social-sciences/peace-conflict-and-development/issue-15/3-Article7Final.pdf>
- Wall, J. A., & Callister, R. R. (2015). Conflict and Its Management. *Journal of Management*, 21(3), 515–558. <https://doi.org/10.1177/014920639502100306>
- Were, E. (2016). Conflict of Interest in Exploitation and Utilisation of Transboundary Natural Resources on Lake Victoria. *Journal of African Conflicts and Peace Studies*, 3(1), 25–37. <https://doi.org/10.5038/2325-484x.3.1.1078>

## APPENDICES

### Appendix A: Data Collection Instruments

#### Appendix A1: Household survey questionnaire

#### SECTION A: SOCIO-DEMOGRAPHIC

1.	Age of respondent. 1. 18 years and below [ ] 2. 18 to 40 years [ ] 3. 40 and above years [ ]
2.	Gender of respondent. a. Male [ ] b. Female [ ] c. Transgender [ ]
3.	Marital status of respondent a. Married [ ] b. Single [ ] c. Divorced [ ] d. Widowed [ ]
4.	What is your religion? a. Christian [ ] b. Muslim [ ] c. Others (Specify).....
5.	What is your level of education? a. No formal education b. Primary [specify] c. Secondary [specify] d. College e. University

6.	<p>Main occupation of household head (tick one)</p> <ul style="list-style-type: none"> <li>a. Livestock Keeping</li> <li>b. Crop cultivation [crop type]</li> <li>c. Hunting/gathering</li> <li>d. Business</li> <li>e. Employed [gov't or private]</li> <li>f. Others (Specify).....</li> </ul>
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**SECTION B: ROLE OF NATURAL RESOURCES IN CONFLICTS.**

7.	<p>Which of these natural resources are critical to livelihoods of the households?</p> <ul style="list-style-type: none"> <li>a. Water [ ]</li> <li>b. Land [ ]</li> <li>c. Pasture [ ]</li> <li>d. Forest/wood [ ]</li> <li>e. Wildlife [ ]</li> <li>f. Minerals [ ]</li> <li>g. Others (specify).....</li> </ul>
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8.	<p>Rank the resources in terms of importance to your household (give reasons)</p> <ul style="list-style-type: none"> <li>a. Water [ ]</li> <li>b. Land [ ]</li> <li>c. Pasture [ ]</li> <li>d. Forest/wood [ ]</li> <li>e. Wildlife [ ]</li> <li>f. Minerals [ ]</li> </ul> <p>Others (specify).....</p>
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9.	<p>Do you happen to know any instances where the following resources have been a source of conflict?</p> <ul style="list-style-type: none"> <li>a. Water</li> <li>b. Land</li> <li>c. Pasture</li> <li>d. Forest/wood</li> <li>e. Wildlife</li> <li>f. Minerals</li> </ul> <p>Others (specify).....</p>
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10.	<p>If yes above who were the actors and what was the issue and how was it solved ?.....</p>
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	..... ..... ..... ..... .....
11.	
12.	<p>Which natural resources lead to <b>frequent</b> conflict?</p> <p style="text-align: center;">[ Not at all]    [Rare]    [Often]    [Very often]</p> <p>a. Water            [ ]            [ ]            [ ]            [ ]</p> <p>b. Land             [ ]            [ ]            [ ]            [ ]</p> <p>c. Pasture          [ ]            [ ]            [ ]            [ ]</p> <p>d. Forest/wood    [ ]            [ ]            [ ]            [ ]</p> <p>e. Wildlife         [ ]            [ ]            [ ]            [ ]</p> <p>f. Minerals         [ ]            [ ]            [ ]            [ ]</p> <p>g. Others (specify).....</p>
<b>SECTION C: ACTORS INVOLVED IN CONFLICT AND THEIR ROLE</b>	
13.	<p>Which of the following actors play a role in resource conflicts in the area?</p> <p>a. Elders</p> <p>b. Youths</p> <p>c. Women</p> <p>d. Government officials (specify)</p> <p>e. Religious leaders</p> <p>f. Political leaders</p> <p>g. NGOs</p> <p>h. Others (Specify).....</p>
14.	<p>Do you think the following groups play an important role in resource conflicts in the area?</p> <ul style="list-style-type: none"> <li>• Bandits</li> <li>• Tribal Militias</li> </ul> <p>If yes give their role (instance, when, where) and if no is, they not important</p>
15.	What role do the following actors play in resource conflict resolution

	<ul style="list-style-type: none"> <li>a. Elders</li> <li>b. Youths</li> <li>c. Women</li> <li>d. Government officials (specify)</li> <li>e. Religious leaders</li> <li>f. Political leaders</li> <li>g. NGOs</li> </ul> <p>Others (Specify).....</p>
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**PART D: LONG- AND SHORT-TERM EFFECTS OF THE RESOURCE CONFLICT**

16.	<p>Has any member of your family been injured, or lost life due to conflict?</p> <ul style="list-style-type: none"> <li>a. Yes</li> <li>b. No</li> </ul>
17.	<p>Have you lost any livestock, granary stock or property to raids or conflict?</p> <p style="text-align: center;">Yes or No</p>
18.	<p>If yes, which ones?</p> <ul style="list-style-type: none"> <li>a. 1-10 animals</li> <li>b. 11-50 animals</li> <li>c. More than 50 animals</li> <li>d. Granary stocks</li> <li>e. Movable Property</li> </ul>
19.	<p>Have you lost access to any of the following as a result of raids or conflicts?</p> <ul style="list-style-type: none"> <li>a. Grazing land</li> <li>b. Farmland</li> </ul>

	<p>c. Wells</p> <p>d. Other water sources</p>																								
20.	<p>Which are other impacts of the long–running resource conflict on livelihoods and development in the area</p> <p>.....</p> <p>.....</p> <p>.....</p>																								
<b>SECTION E: STRATEGIES USED TO MANAGE NATURAL RESOURCE CONFLICT</b>																									
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>How effective have the following institutions been effective in resolving conflicts in the past?</p> <table border="1"> <thead> <tr> <th></th> <th>Not effective</th> <th>Effective</th> <th>Very effective</th> </tr> </thead> <tbody> <tr> <td>Traditional Peace Committee</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Government (e.g. police)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Government institutions</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Religious organizations</td> <td></td> <td></td> <td></td> </tr> <tr> <td>NGOs (local/international)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Not effective	Effective	Very effective	Traditional Peace Committee				Government (e.g. police)				Government institutions				Religious organizations				NGOs (local/international)			
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<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>In what ways can resources in Kerio valley be managed to promote peace and development</p> <p>.....</p> <p>.....</p> <p>.....</p>																								
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>What are the challenges involved in the effective implementation of these strategies?</p> <p>.....</p> <p>.....</p> <p>.....</p>																								

*Thank You for the Full Cooperation!*

## **Appendix A2: Key Informant Interview schedule**

### **General Introduction**

### **Interview Guide Questions**

- i. What are the causes of conflict in Kerio Valley? Explain
- ii. Who are the main actors in the conflict and what role do they play in the conflict?
- iii. Do conflict hotspots areas exist? If yes why and name them.
- iv. What are the short- and long-term impacts of these conflicts?
- v. Which methods are used mostly to solve conflicts?
- vi. What are the challenges encountered or experienced in solving conflicts?



## **Appendix A3: Focus Group Discussion Guide**

### **Introduction**

Thank you for agreeing to be a part of this discussion. My name is ..... and will be leading this discussion session. The session will be audio taped so as not to miss on ideas presented. Our aim and purpose of conducting this discussion is to understand the analysis and dynamics of natural resources conflicts. We would wish to inform you that there are no wrong or right answers in this discussion. Please be assured that your personal details or what you say as a person will not be used at any time. What one says is therefore guaranteed to be confidential and anonymous. We will ensure confidentiality about all the information discussed. This discussion will also be anonymous – as no names mentioned or used will recorded .so everyone is therefore urged to participate actively and to feel free during the discussion. The team will produce reports immediately after the discussions highlighting key observations from the session.

### **PART A: GENERAL INFORMATION**

Date of FGDs:	
FGDs Number:	
Time interview started:	
Time interview ended:	
Name of note taker:	
Name of interviewer:	
Script code:	

## Questions

- i. What are the causes of conflict in Kerio Valley? Explain
- ii. Who are the main actors in the conflict and what role do they play in the conflict?
- iii. Do conflict hotspots areas exist? If yes why and name them.
- iv. What are the short- and long-term impacts of these conflicts?
- v. Which methods are used mostly to solve conflicts?
- vi. What are the challenges encountered or experienced in solving conflicts?

#### **Appendix A4: Observation schedule**

- 1) Physical setting – aims at understanding the biophysical and socio-cultural environment of the study.
- 2) Population Setting (population interactions, activities, behaviors) – aims at understanding the context in which the population operations
- 3) Programs and processes – aim at understanding operations and activities in the study area that are related to the conflict.
- 4) Communication – aims at understanding how actors communicate with one another and the implications for conflict.
- 5) Any visible indicators of conflict e.g. burnt houses, inaccessible pastures and water points, killed livestock/people, weapons, spent cartridges, etc