

**CONTRIBUTION OF PEACE INITIATIVE POLICY TO THE WELLBEING
OF HOUSEHOLDS AFFECTED BY NATURAL RESOURCE BASED
CONFLICTS IN LAIKIPIA NORTH SUB-COUNTY, LAIKIPIA COUNTY,
KENYA**

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University**

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DECLARATION

I declare that this document and the research that they describe are my original work and that they have not been presented in any other University for academic work.

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This proposal was written under our supervision and is submitted with our approval as University supervisors.

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DEDICATION

I dedicate this research proposal to my dear late mother Mrs Agneta Shimuli Navukhu

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ABSTRACT

The recent upsurge of Natural Resource Based Conflicts in Laikipia County in Northern Kenya have been linked to lack of equitable access and sharing of key resources of pasture and water found within the several large private wildlife conservancies and ranches during periods of severe drought. Peace Initiative Policy (PIP) were instituted to counter these conflicts by the government and other agencies and this study aimed at assessing the contribution of these policies on the wellbeing of households that were affected by the conflicts. The objectives of this study were to: evaluate the contribution of the opening of large ranches for grazing by pastoralists to the status of livelihood in households, analyse the contribution of improvement of availability of water to the status of livelihood, assess the contribution of conservation and sustainability of natural resources to the status of livelihood in households, assess the contribution of market creation to the status of livelihood in households. The sampling frame was 43,712 pastoral households in Laikipia North Sub County. A stratified random sample of 211 households was used. Data on the study variables were collected by use of an interview schedule and 50 Key Informants Interviews. The data were analysed using descriptive (frequency distributions, means and standard deviation) and inferential (chi-square tests) statistics. The Peace Policy initiatives significantly ($p < 0.05$) contributed positively to the wellbeing of the households that were recovering from conflicts. Specifically, the opening of large ranches for grazing by pastoralists had a mean of 3.48 on a scale of 1 to 7, while improved water availability had 3.77, creation of marketing institutions had 3.82, and the conservation and sustainable utilization of natural resources had 1.42. The study recommended proper planning and a review of pastoral development policies by the Ministry of Natural resources to increase the peace initiatives so as to enhance the wellbeing of the people. A steering committee to coordinate all the efforts of the stakeholders (county government, local Non-Governmental Organizations (NGOs) and community leaders) involved in the development of pastoral communities in the study area.

DEFINITION OF TERMS

Biodiversity: Referred to a variety of plants and animals in the wetland ecosystem.

Conflict: Incompatibility caused by divergence of needs, values and interests.

Households: a group of persons, related or unrelated, who live together in the same dwelling unit, who make common provisions for food and income for the purpose of their welfare.

Livelihood: Comprises the capabilities (social and material resources) and activities required for a means of living.

Natural resources: Are sources of wealth that occur in a natural state.

Protracted social conflicts: refers to conflict situations characterized by the prolonged and often violent struggle by communal groups for such basic needs as security, recognition, acceptance, fair access to political institutions, and economic participation.

Socio-economic wellbeing – is a combination of factors that connote a stable household, that is sustainable income, occupation, land ownership, housing conditions, access to food, access to health and access to water and sanitation.

Socio-economic wellbeing – is a combination of factors that connote a stable household, these factors include: that is sustainable income, occupation, land ownership, housing conditions, access to food, access to health and access to water and sanitation.

ABBREVIATIONS AND ACRONYMS

ADR	Alternative Dispute Resolution mechanisms
ASALs	Arid Semi-Arid Lands
CDC	Centres for Disease Control and Prevention
IDEA	International Institute for Democracy and Electoral Assistance.
IIRR	International Institute for Rural Reconstruction
KALRO	Kenya Agricultural and Livestock Research Organization
LWF	Laikipia Wildlife Forum
NG-CDF	National Government Constituencies Development Fund
NRBC	Natural Resource Based Conflicts
NRT	Northern Rangelands Trust
TDRMs	Traditional Dispute Resolution Mechanisms

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This study assessed the contribution of Peace Initiative Policy (PIP) to the wellbeing of households affected by natural resource based conflicts in Laikipia North sub-county, Laikipia County, Kenya. The four (4) independent variables of the study were the strategies that were advocated in the peace policy, these included: the opening of large commercial ranches to pastoralists to graze their animals, provision of water for pastoralists and their animals, creation of markets for agricultural and livestock products, conservation and sustainable utilization of natural resources by the pastoralists. The dependent variable was the wellbeing of the pastoral households affected by conflicts. This chapter introduces the study under the following sub-headings: background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, scope of the study, delimitation of the study, limitations of the study, assumptions of the study, theoretical framework, and conceptual frame work.

1.2 Background of the Study

Natural resources play an important role in the economic development of Laikipia County by providing the inhabitants with their socioeconomic needs. They are a source of income and a basis for industrial development in addition to serving as a cultural identity (USIP, 2007). Scarcity and unsustainable consumption of these resources therefore, has a potential of provoking violent conflicts among communities and even countries (Paltseva, & Roine, 2011). Natural resource based conflicts (NRBC) occur where there are disagreements between two or more parties over access to, and control over natural resources and where the priorities in use of the resources are not compatible

or considered in policies and development programmes (FAO, 2000; USIP, 2007, Bronkhorst & Bob, 2010; Onyesom, & Igbesi, 2015). Recently there has been an upsurge of NRBC in Laikipia and Samburu Counties of Northern Kenya which are mostly linked to access and use of Natural Resources by pastoralists and largescale ranchers in Samburu, Laikipia and other neighbouring counties - especially during periods of severe droughts (Bond, 2014; Owegi, Tolometi, & Kwambai 2014; Muigua, 2016; Owino, 2016; Omolo, 2018). The key resources of concern include pasture, water and wildlife within the several large privately owned lands.

Studies have shown that NRBC have serious negative impacts in terms of; loss of human life and property, people displacements, disruption of livelihoods and economic activities as well as environmental degradation (Pkalya, Adan & Masinde 2003; Beckline, Yujun, Zama, John, Tahle, Lisette & Bernard 2016). The escalation of NRBC in Samburu and Laikipia Counties therefore threatens not only the peoples' livelihoods but the viability of wildlife conservation and tourism – a key economic sector for the counties and the country as a whole (World Bank 2010; Okech 2010). Nevertheless, the relationship between natural resource endowment, outbreak of conflicts, environmental degradation, peoples' livelihoods and economy is complex and poorly understood (Maphosa, 2012). Equitable and sustainable utilization of Natural resources for the current and future generation is key for success of economies dependent on these resource (Academy of Sciences, 2005).

In Laikipia and Samburu there is disparity in natural resource use systems between the different user groups. Whereas a significant portion of Laikipia county (over 37%) is under large scale well organized and planned private livestock and wildlife ranching

and conservancy system for tourism and beef production (Laikipia Wildlife Forum 2013), a major part of Samburu County (over 60%) is under open communal pastoral land use system where pastoralists move their animals in open landscape in search of pasture (Samburu County Government 2013; IIRR 2010; Apollos, 2017).

Furthermore, although there a number of interventions in the study area that promote sustainable and equitable sharing these natural resources as a way of mitigating against NRBC (Kipkemoi, Nyamasyo and Musingi, 2017), majority of the interventions put more emphasis on negotiation and mediation (Kenya Wildlife Conservancies Association 2016; Muigua 2016). Since the promulgation of the 2010 Constitution of Kenya, the use of Alternative Dispute Resolution (ADR) mechanisms and Traditional Dispute Resolution Mechanisms (TDRMs) in managing natural resource conflicts was formalised in Kenya. However, the success of these approach has yet to be demonstrated. This study therefore aims at assessing the effectiveness of these peace policies on the livelihood of the people at the household level.

1.3 Statement of the Problem

Conflicts within the marginalised communities of Africa have remained a persistent issue for more than a decade. These conflicts arise from the use of the natural resources. Several mitigating and peace building initiatives have been introduced within these communities to try and curb these conflicts. In Kenya the issue of conflicts arising from the use of natural resources was addressed by the new constitution through the formation of Alternative Dispute Resolution (ADR) mechanisms and Traditional Dispute Resolution Mechanisms (TDRMs). In Laikipia these policies were applied to mitigate against NRBC and bring about peace and enhanced resource management and improved livelihood of the people relying on the natural resources. The peace policy

with six intervention measures was applied in Laikipia and Samburu counties where it was expected that the community will not only experience peace but also an improvement of livelihood of the people, increased natural resource production and resource management. Despite growing peace however, the communities remain marginalised in terms of education, economic wellbeing and social growth. Majority of the studies in the areas have focused on the effects of the conflict and possible remedies. Not much attention has been given to the effects that the peace initiatives and policies have on the livelihood of the community. This study therefore focused on assessing the influence of peace policy on the livelihood of the communities at household level.

1.4 Purpose of the Study

The purpose of this study was to analyse the contribution of the peace policy initiatives on the wellbeing of households that were recovering from conflicts in Laikipia North sub-county, Laikipia County, Kenya.

1.5 Objectives of the Study

1.5.1 General Objective

The general objective of this study was to assess the contribution of peace policy initiative on the socioeconomic wellbeing of pastoralists in Laikipia North Sub-County, Laikipia County.

1.5.2 Specific Objectives

- (i) To evaluate the contribution of the opening of large ranches for grazing by pastoralists to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.

- (ii) To analyse the contribution of improved water availability to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.
- (iii) To assess the contribution of market creation to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.
- (iv) To determine the contribution of the initiative to conserve and sustainably utilise the natural resources on the wellbeing of the pastoral households in Laikipia North Sub-County

1.6 Research Questions

The study was guided by the following research questions:

- (i) What is the contribution of the opening of large ranches for grazing by pastoralists to the wellbeing of households recovering from natural resource based conflicts in Laikipia North Sub-County?
- (ii) What are effects of the contribution of improvement of water availability to the wellbeing of households recovering from natural resource based conflicts in Laikipia North Sub-County?
- (iii) How has the creation of market centres contributed to the wellbeing of households recovering from natural resource based conflicts in Laikipia North Sub-County?
- (iv) How has the initiative to conserve and sustainably utilise the natural resources contributed to the wellbeing of the households in Laikipia North Sub-County

1.7 Significance of the Study

Degradation of Natural resources and biodiversity is on the rise globally due to the increasing pressure and competition over these resources. The result has been escalation of conflicts with disastrous consequences. The impact of NRBC on natural conservation

and equitable sharing as well as the economic development in Kenya especially in pastoral areas is poorly understood. This study will provide insights into how development agencies can incorporate the concept of natural resource equitable access and conservation to mitigate NRBC. It will link and contribute to other body of information and interventions in natural resource conflicts mitigations and livelihood; (FAO, 2000; Mathenge, 2013); UN DPA & UNEP, 2015; Kimenyi & Lewis 2016; and Kipkemoi et al., 2017).

1.8 Scope of the Study

The study focussed on Laikipia North Sub-County. Laikipia North Sub-County is one of the three Sub-counties of Laikipia County located to the north of the equator in the former Rift valley province. The Sub-county has an estimated total population of 86,712 (LCIDPs 2013). The study limited itself to the sub-county's hotspot areas where pastoralists have been reported to invade the private ranches in search of pasture during severe droughts. It also focussed on natural resources of which were key to pastoral livelihoods and of economic importance to them, therefore having a greater potential for causing conflicts.

1.9 Delimitation of the Study

The study ensured that all the key players in the selected resource-based conflict areas were considered, this included: the pastoralists, large scale ranch owners and development agencies. The study also was limited to a few key natural resources that were important to the locals in providing for their livelihood, economy and having a greater potential in causing conflicts within the study area

1.10 Limitations of the Study

Conflict and natural resource use and equitable sharing is an emotive issue in Kenya and many would be informants were reserved in their responses. To counter this limitation, the researcher used enumerators who were from the same area, avoided the use of sensitive and political questions and reassured the respondents that the study results were to be used only for the purpose of knowledge generation. The interviews were administered in a manner that did not create unnecessary expectations and perceptions. The respondent's names and contacts were not recorded. Another limitation was that very limited information on economic valuation of natural resources generally and in the two counties. To counter this limitation, the researcher carried out extensive literature review including grey literature and did a Key Informants Interview.

1.11 Assumptions of the Study

The study assumptions were that respondents would be transparent and would answer the survey truthfully.

1.12 Justification of the Study

NRBC have a potential of causing environmental degradation, disrupting livelihoods and harming economy of not only Samburu and Laikipia counties, but the country as a whole thus the need to mitigate these effects. An in-depth understanding of the relationship between conflicts, natural resource use, peoples' livelihoods and economy in these two counties will help provide the policy and development actors basic parameters for development of appropriate NRBC mitigation measures.

1.13 Theoretical Framework

The study used two theories, the Human needs theory and the protracted social conflicts to guide the study.

1.13.1 Human Needs Theory

The study was guided by the human needs theory this due to the fact that the natural resource based conflicts in Laikipia are related to the basic needs of the pastoral communities as they rely on the natural resources for their survival (Cao, Jiang, Ohl & Liao 2013).

The human needs approach was developed by John Burton (1999), who based his approach on Abraham Maslow's hierarchy of needs (McLeod, 2014), a model of psychological motivation, in which needs range from physiological to self-actualization. Put another way, from the essential needs required to survive to the realization of one's potential (Hablemitoglu, Ozkan & Purutcuoglu, 2010)

Burton (1999) records that human needs are universal and if they are not met from within, society frustration and then conflict tend to occur. A state to be legitimate it needs to fulfil human needs (for example, growth and development), values (customs and beliefs), and interests (relating to material goods). Needs are universal and primordial in nature, whereas interests relate to the aspirations of both the individual and identity groups, meaning that needs, values and interests are a hierarchy ranging from the essential of needs and values to the desired of interests. Needs and values are non-negotiable whereas interests are negotiable as needs and strongly held values are drives for human survival and development. In terms of conflict resolution, where a conflict is at the level of human needs it is likely to be intractable as situations that

involve needs do not respond to negotiation, bargaining, or coercion. This concept has been described further based on conflicts occurring in Africa (Abaho, 2020).

1.13.2 Protracted Social Conflicts

Protracted Social Conflicts is a theory developed by Edward Azar (1990). The term refers to conflict situations characterized by the prolonged and often violent struggle by communal groups for such basic needs as security, recognition, acceptance, fair access to political institutions, and economic participation.

The communal groups may experience deep-seated cleavages based upon racial, religious, cultural or ethnic lines. These cleavages are characterized by continuing hostility with sporadic outbreaks of violence; and caused by the frustration of human needs for security, recognition, and distributive justice. These identity-driven rifts are the result of an underlying fear of extinction that often grows within vulnerable ethnic groups who live with the memories or fear of persecution and massacre. Ethnic divisions and perceived threats often result in the domination of the state machinery by a single group or coalition of elites who deny access to basic human needs for the majority of the population (Azar, 1990).

The human needs approach has been very influential and Azar's concept of protracted social conflict developed to explain protracted social conflicts, in which the unit of analysis is the identity group- race, racial, religious, ethnic, cultural, and others. It is the denial of such identities, which are basic needs, which drove identity related conflicts.

1.14 Conceptual Framework

The conceptual framework demonstrates the relationship between conflict mitigation measures advocated by the NRBC mitigation policy and the livelihood status of the households in Laikipia north Sub County. It shows the multifaceted nature of NRBC mitigation policy and its interrelationship with the economy, socio-cultural and natural resource management. The study identifies six conflict mitigation measures advocated by the policy instrument, which include: provision of grazing through opening of large scale ranches for grazing by pastoral communities, improvement on the availability of scarce natural resources such as water, conservation and sustainable use of the natural resources, building and enhancing institutions involved in the enhancement of peace, and creation of markets for the natural resource products.

The conceptual framework depicted in Figure 1 shows that the independent variables of the study will include: the opening of large private ranches for grazing by the pastoralists, improvement of the availability of scarce resources such as water, development of activities associated with the conservation and sustainability of natural resources by creating wildlife conservancies and tourism economic activities, creation of peace building institutions (this includes collective action and stakeholder participation in development ventures), and the creation of markets for natural resource products.

The dependent variable is the status of livelihoods among the households affected by the conflicts, which is indicated by the increase in livestock numbers, level of engagement in development activities, income the household earns from the natural resource related activities, number and variation of meals consumed at the household

level, and crop production activities. It is recognised that this direct relationship between the peace mitigation activities and household livelihood status can be affected by intervening factors such as drought and natural epidemics common in the area.

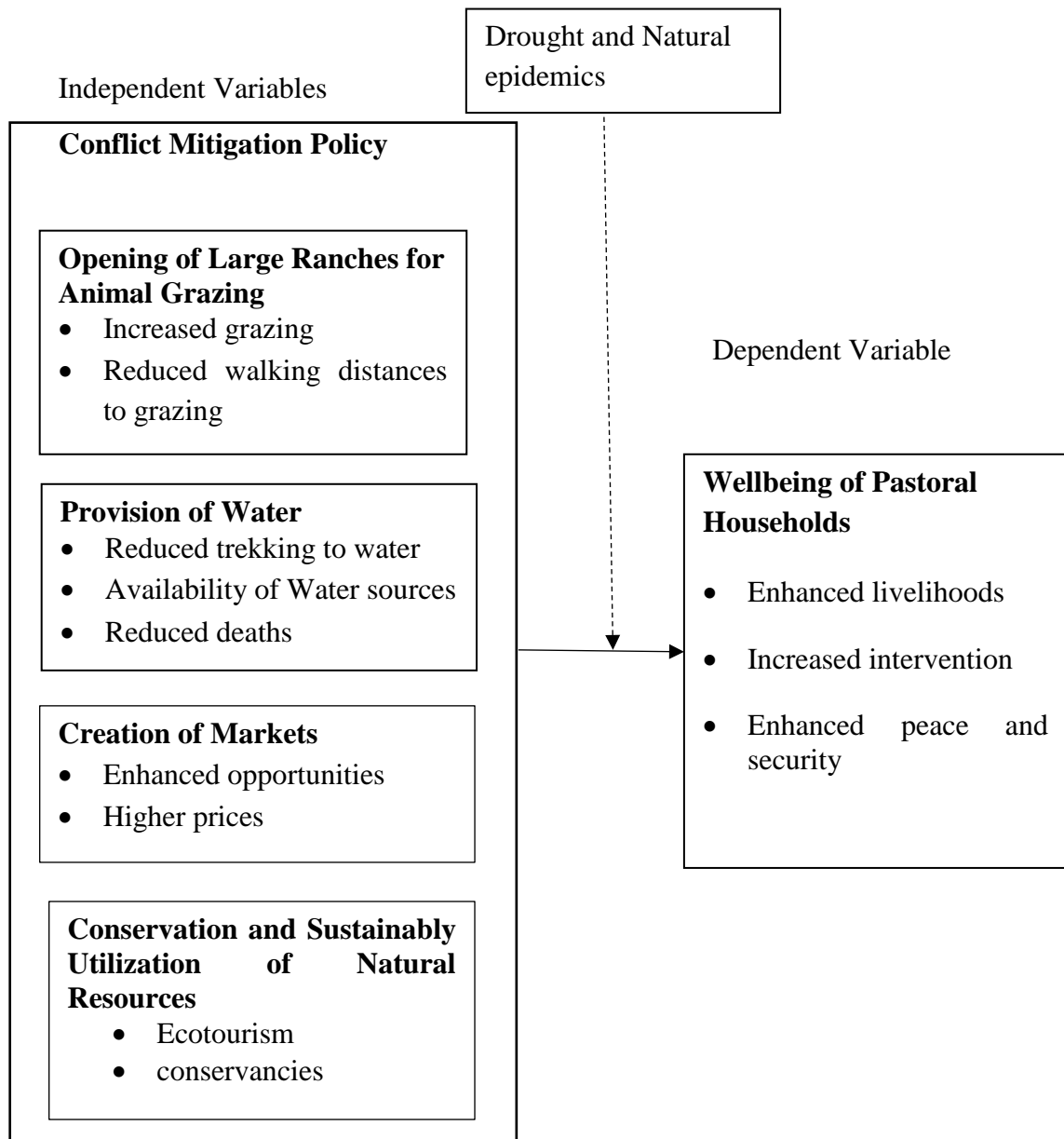


Figure 1: Conceptual Framework Depicting the Relationship between Conflicts Mitigation Activities and Wellbeing of pastoral Households in Laikipia North Sub County

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This literature review analyses the natural resources of importance in peoples' livelihoods and economy in dry lands of Africa with reference to Kenya and their role in provoking NRBC. It starts by describing the key natural resources in the dry lands and their various importance roles. It then defines Natural Resources Conflicts, underlying causes, impacts and the various mitigation measures undertaken by development agencies.

2.2 Factors Causing Conflicts in Laikipia County

The patterns of division and conflict in Laikipia and similar regions in the Horn are complex. There are many factors contributing to the risk of violent conflict involving pastoralists, and these have tended to become mutually reinforcing. Some conflicts within and between pastoralist communities, such as raiding and cattle-rustling, have a long history and have to some extent become an aspect of traditional pastoralist culture. However, such 'traditional' conflicts have become increasingly destructive and less manageable. Khaemba (2014) indicates that a study of the conflict reveals some factors that could have led to the development and prevalence of the conflict. He especially pays attention to small arms proliferation within the country. Small arms which include automatic weapons have become increasingly accessible in areas around Laikipia and Samburu. Although the sources are yet to be fully analysed, much of the information points to Sudan and Northern Uganda as well as poorly managed stockpiles of defence and Police weaponry in specific areas in the countries. Because of the availability of the weapons, the conflict in the region has become much worse and even more violent.

In addition, conflict management strategies have fallen short and resolution has been made more difficult.

Weible (2005) further points out that the Kenyan government has failed to recognize the value and authority of traditional governments forcing the communities to avert to violence to resolve their problems. The government and other agencies that are resident within the northern Kenya borders have failed to recognize the value of the traditional elders' council in finding a lasting solution to the persistence conflicts. Customary conflict resolution methods have further been weakened by increasing capitalism and individualism, leaving the community prone to continued raids and retaliation. policies pursued by successive colonial and post-colonial governments in Kenya have tended not only to neglect the needs of pastoralists but also often to run directly counter to pastoralist interests with a bias instead towards ranchers, horticulturalists, and other resource users. This has exacerbated problems and insecurities of pastoralist communities, particularly in relation to access to scarce water and pasture (Tyler 1999, Castro and Nielsen 2003).

2.3 Conflict Policies and Livelihood Economies

Much of the literature to date claims that marginalized communities are able to change behaviours, attitudes and increase sustainable development (Stocker and Barnett, 1998). There are several conflicts that can be noted in the literature, which arise from failure of scholars to note that studies and results drawn in these areas are highly dependent on the context, (Church and Elster, 2002). Scholars and academicians in this field have failed to provide a clear idea as to what kind of people are likely to be involved in activities generated by the need for conflict management and how they are affected by such activities (Maiteny, 2002). Scholars however agree that the conflict

resolution in itself attracts a variety of participants and are driven by various initiatives based on the context upon which they are formed and managed (Kendall, 2003). But even with this, there lacks an understanding of who is likely to join these initiatives especially when it comes to marginalized communities such as the pastoralist and what it might mean for their own wellbeing.

A wide array of literature suggests various factors that relate to the nature of the conflict policies and the activities they engage in as possible having an effect on the women and level of participation by community members (Michaellis, 2002). Reuf (2010), for example continues to provide an illustration, that it is important that objectives be determined, discussed and approached by the entirety of the community, and that the issues being addressed be deemed as part of an increasing local problem which should be approached optimistically. Church and Elster (2002), however disagree, and insist that peace initiatives are mostly determined by funding and competent management, which in turn leads to recognized success in achieving more objectives of community development and thus attracting more participation from the community. Most of the factors found in the literature are more procedural and substantive, they explain how to ensure that peace initiatives and activities are successful, but fail to explain which types of activities are most likely to have effect on the lifestyle of their members. There is limited research on substantive factors that may have an impact on the wellbeing of the members: for instance, the nature and type of diversification, the type of activities it promotes and the kind of involvement that it requires. In addition, many of these claims are based on weak evidence, for example drawing on only one case or one type of intervention (Middlemiss, 2011).

Some authors claim that conflict management activities are often a good foundation for sustainable development activities in a community, including promotion of positive socio-economic change for the individuals involved in the activities (Beaver and Cohen, 2004). Such positive changes are expected to spill over into other communities and surrounding neighbourhoods, over time leading to increased and sustainable rural development (Fung and Wright, 2003). Peace activities especially in marginalized communities can help in contributing towards community development and poverty reduction by allowing members to participate and take control of their own socio-economic wellbeing, gain access to new economic opportunities and empowering members to priorities activities geared at providing solutions for their own problems (Lucey, 1997). On the other hand, others such as Church and Elster (2002) indicate that the peace initiatives in marginalized communities are weak, lack coordination and in many cases have few sustainable positive results for the individuals. In addition, some of the benefits that come from the activities are not distributed evenly, with influential members and leaders of the community getting a majority of the share, and some of the community being excluded (Narayan, 1999).

Hardin (1982) and Olson (1965) are considered as the pioneers of principles in diversification in marginalized societies, and developing the theories associated with the same. Many of the scholars that came after them agree that the pursuit of peace can be for various purposes. Knox et al (1998), indicate that many conflict management activities today are for purposes of adopting or developing new technology. Nagido and Kirk (2000), indicate that the same communities are most active in the management of natural resources such as range land. It can therefore be said, that scholars and experts in management of conflicts agree that the influence of the activities varies from

situation to situation (Bond 2014). This study intends to document the various peace initiatives within Laikipia and Samburu and the influence they generate within the households.

There is a limit to what marginalized groups of the poor can do on their own. Even with targets and objectives, the hard work of the local marginalized households is severely limited by the resources that they have access to. Without external assistance, the peace initiatives become limited by the lack of material and financial resources.

2.4 Conflict Management in Pastoral Communities

Efforts to prevent and reduce the prevalence of conflict within Laikipia and Samburu have been ongoing for decades. Markakis (1993) indicates that the development of the right tools to combat the conflict have been challenging for Kenya as a country as specifically the Kenyan government. Even the current effects and products that is limited peace presence have only been experienced after years and decades of work. With serious attempts however, there have been a significant decline in the amount of conflict being experienced in the region as well as management of factors causing the conflict, even though such results maybe far from what is expected and desired. Mkutu (2008) and Pantuliano (2010) give credit to the DFID and the UN efforts to manage the conflict directly by introducing programs and measures that address the needs of the community directly, especially when it comes to resource use and division during droughts. These programs which have created the foundation for Kenya's peace policy are directly involving in terms of enhancing mediation and conflict prevention measures which improve the capacity of both the local and national players. Babiker (2001) concludes therefore that in order to be effective, Projects in support of pastoralists need to strategically invest in awareness raising, training and local peace-building resources,

including potentially undervalued resources within each community such as women's networks.

Bollig *et al.*, (2013) in their study found that majority of the time, the government response to the conflict is more reactive than organized. It is only when the media has played out the violence, and many have been injured that peace initiatives are granted and given the light of day. The communities therefore remain largely marginalized, unable to manage even the most basic political aspirations and decisions. This marginalization has further alienated the peace initiatives; in which the pastoralists feel they were not involved in the development of the same. They therefore, tend to ignore and participate poorly in enhancing the same policies which provides a platform for failure.

2.5 Natural Resource Based Conflicts

Natural Resource Based Conflict (NRBC) can be defined as disagreements and disputes over access to, and control of natural resources (Sheriff, 2004). Over the years, Kenya has experienced conflicts over natural resources such as water, forests and land. Competition over Natural Resources is often driven by scarcity and differences in interest, access and management of the resource in question. Conflict erupts when different parties believe that their needs, values and interests cannot be met or are under threat or there is inequity in distribution of resource revenues and other benefits from the shared natural resources (Okech, 2010). It should be noted however that NRBCs are also caused by a number of underlying issues including deeply rooted grievances such as lack of recognition, rights, identity and participation, unpopular development policies and structural injustice.

The need to access pasture by pastoralists has often led to conflicts between pastoralist groups as well settled farmers and private land users (Oladele & Oladele, 2011). In Laikipia County, violent conflicts have been blamed to need to access and utilize pasture and water by pastoralists during severe droughts which forces pastoralists to invade private conservancies and wildlife reserve in the county. The increasingly severe and frequent droughts and land degradation due to uncontrolled grazing in the surrounding counties has left pastoralists with no option but seek pasture and water beyond their traditional grazing areas.

Every NRBC is unique in its own way. However, in general NRBC can be classified based on the level at which it occurs and the type of natural resources responsible for the conflicts. Based on this classification. Roe and Sandbrook (2013) identified three categories namely intra micro–micro conflicts where the dispute is between private and communal land owners; inter micro–micro conflicts where the conflict is between land-owners and resource users, and micro–macro conflicts where there is contradictory natural resource needs and values (Schilling *et al.* 2012). Thus, resource wise, NRBC can also be referred to as biodiversity conflicts, water conflicts, land conflicts, human-wildlife conflicts.

2.6 Effect of Natural Resource-Based Conflicts

The effects of NRBC range from physical harm to humans and the natural resource to economic development. Studies have shown that NRBC often results in loss of human life and property, displacements, disruption of livelihoods, food insecurity, poverty, land degradation and loss of biodiversity (Pkalya et al. 2003). It is estimated that NRBC in Africa have claimed over three (3) million lives through civil war. In pastoral areas, chronic insecurity and endemic violence has seen the destruction of peoples’

livelihoods and economy leaving them trapped in cycles of violence and poverty (Waikenda, 2017). The loss of livestock as a result of NRBC has a serious negative impact on pastoralism which is the main economic and food production activities in the drylands. NRBC are known to drive environment degradation by accelerating resource extraction as communities are forced to concentrate in constrained areas considered safer or accessible. Indeed, the invasion of conservation areas by pastoralists as in Laikipia County in Kenya threatens not only the biodiversity conservation efforts but also the economy of the county as a whole. NRBC impact on conservation effects can also manifest itself in the form of complete abandonment of conservation measures by governments and other development agencies (Catley *et al.* 2013). The costs NRBC inform of diversion of development resources to military expenditure, destruction of infrastructure and care for displaced persons is well documented. It was estimated that by 2008, the continent was losing close to US\$18 billion annually in conflict expenditure. Protracted NRBC has also been blamed for the proliferation of small arms in Africa (Fratkin 2001).

2.7 Mitigation Measures against Natural Resource-Based Conflicts

Understanding factors that determine emergence and persistence of NRBC is essential in developing mitigation measures and approaches. It is important to understand the different interests and needs of communities sharing particular natural resources before attempting to mediate between feuding communities. Where natural resources are the main driver of inter-community conflicts, addressing management of these resources need to be part of mitigation measures (Bollig *et al.* 2012). Where there are deep-rooted issues to NRBC such as marginalization, a balance should be struck between community and private interests as well as national development priorities (Mier *et al.* 2007). Developing mechanism that ensure equitable sharing of economic benefits

from natural resources tend to encourage peaceful coexistence of communities sharing particular natural resources (Warner, 2000; Rohwerder, 2015).

Efforts aimed at managing the conflicts include both traditional and modern approaches. Traditional institutions and systems of conflict resolution were noted to be functioning with relative effectiveness.

Conflict mediation, followed by programmes of reconciliation and reconstruction, have for long been the building block for peace-building in conflict in Northern. However, more recently, emphasis is being put on participatory approaches where all stakeholders are involved in developing and promoting mitigation measures (Abbass 2014). Nevertheless, these approaches have often tended to leave out issues of equity and benefits sharing. Raising the value of natural resource conservation by people through promotion of equitable benefits can be the starting point in mitigating NRBC (Berkes, 2004). In parts of Northern Kenya, a number of development agencies has started to promote access by pastoralists to key production resources such as pasture, fodder and water through increased production and storage as a way of reducing the scarcity of this resources thus mitigate against possible conflicts. Markakis, (2004) proposed a less common, but interesting approach which uses 'smart' community development projects which focus on sustainable co-management and equitable access of natural resource a basis for peace building.

Natural resource conflicts can, arguably, involve three broad themes namely: actors (or stakeholders, groups of people, government structures and private entities), resource (land, forests, rights, access, use and ownership) and stakes (economic, political, environmental and socio-cultural). As such mitigation of natural Resource Conflicts

should in addition to addressing any underlying issues address resource theme. However, most of the current approaches to NRBC have tended to put more emphasis on the actors' theme (Haro *et al.*2005)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the procedures that was used in the study. It describes the study area, study design, target population, sampling and data collection methods and analysis.

3.2 Location of the Study Area

This study covered the Laikipia North Sub-County. Laikipia North Sub-county is one of the three Sub-counties of Laikipia County. The other Sub-counties are Laikipia East and West. Laikipia County is located along the Equator covering an area of 9,462 km². The county borders Samburu to the North, Isiolo to the North East, Meru to the East, Nyeri to the South East, Nyandarua and Nakuru to the South West and Baringo to the West.

Key natural resources include pasture, forest, wildlife, and rivers. About 75% of the county is dry only suitable for pastoralism (Laikipia County Government 2013). The main economic activities of the county are; tourism, crop agriculture, livestock keeping (ranching and pastoralism) and greenhouse horticulture (Laikipia Tourism Association & Laikipia Wildlife Forum (2015). The Maasai group ranches/conservancies make up the greater part of Laikipia North Sub-county in Mukogodo region and are increasing becoming involved in wildlife conservation for ecotourism. Currently there are 13 of the communal ranches involved in ecotourism (Blair 2008).

Laikipia North Sub County lies in the rain shadow of Mt Kenya water towers. Annual rainfall averages 120 cm p.a. and mean temperature is 21°C. The seasonal calendar of

the area shows that long rains are received between April and July while short rains are from October to December with droughts experienced in between.

Laikipia North sub-county lies to the North of Laikipia County with Sub-County Headquarter at Rumuruti (see map on Figure 2). It has four wards namely: Mukogodo East, Mukogodo West, Segera, and Sosian and covers an area of 5,434.3 sq. kms (Laikipia county First County Development Integrated Development Plan 2013-2017).

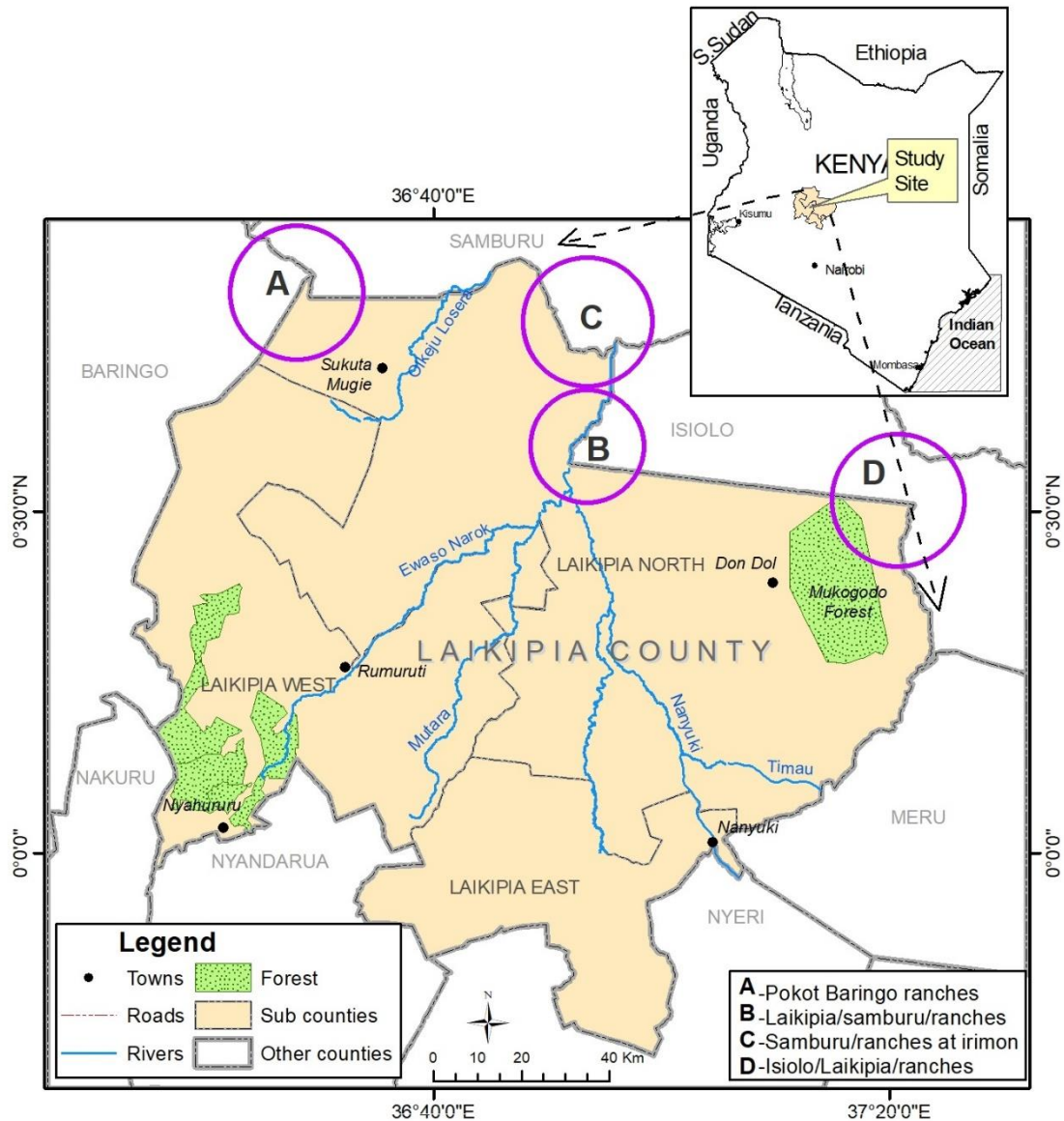


Figure 2: Map of the study area. Laikipia North Sub County (Source: NG-CDF)

3.3 Research Design

The study employed the *ex post facto* research design, involving causal comparative (Trochim and Donnelly, 2008). Kathuri and Pals (1993) defined *ex post facto* research as a systematic empirical inquiry in which the researcher does not have direct control of independent variables because their manifestation has already occurred or because they cannot be manipulated. Cohen, Manion and Morison (2000) noted that *ex post*

facto designs begins with groups that are already different in some respect and then searches in retrospect for factors that brought about those differences. It seeks to reveal possible relationships by observing an existing condition or state of affairs and then searching back in time for plausible contributing factors (Kerlinger and Lee, 2000).

This design was deemed to be appropriate for the study because the manifestation of the independent variables had already occurred without any manipulation. The influence of the independent variables on the dependent were then determined.

3.4 Target Population

The study targeted the total household population of Laikipia North Sub-County, which is 43,712 households (Laikipia County First County Integrated Development Plan 2013-2017). This population includes pastoralists, wildlife conservancy owners and representatives of institutions involved in Natural Resource Conservation and Conflict mitigation such as National Environmental Management Authority (NEMA), Kenya Agricultural and Livestock Research Organization (KALRO), Kenya Forest Service (KFS), Kenya Wildlife Service (KWS), Laikipia Wildlife Forum (LWF), Northern Rangelands Trust (NRT) County Ministries, and State County Administrators.

3.5 Sampling Design

The study used stratified random sampling. The respondents were first divided into strata as per their geographical location, then from each stratum that is, Laikipia north Sub County the researcher randomly selected 381 households using this formula of Kjerchie and Morgan (1970), the sample size was 200 which was proportionally distributed across the four selected sub-counties. The Key Informants were purposively selected for this study.

3.6 Structured Interviews

Structured interviews were administered by the researcher and research assistants on sampled pastoralist's households to generate data on key natural resources, incidence of Natural Resource Based Conflict (NRBC) and their impact on livelihoods, conservation and economy. The questionnaire was divided into three sections. First section covered the demographic characteristics of respondents. Second section covered key natural resources, their importance and relation to NRBC. The last section dealt with the contribution of NRBC on peoples' livelihoods, conservation and the economy.

The study used both qualitative and quantitative data. Qualitative data was aimed at understanding the subjects' behaviour within natural setting while quantitative data emphasised on collection of statistically analysable data to confirm or reject the hypotheses (Johnson, & Christensen. 2014). The designs enabled data collection from both expert informants and the households sampled. Questionnaires were administered by research assistants supervised by the researcher. Data was collected through Scheduled one-on-one interviews, Key informants Interview, and observations.

3.6.1 Key Informant Interviews

Key Informants Interviews (KII) were conducted with representatives of conservancies and key institutions in the study area. A semi-structured questionnaire was used to generate information on perceived causes of Natural Resource Based Conflicts, their effects on peoples' livelihoods and natural resource conservation and the mitigation measures being undertaken. This data was used in triangulating the household survey information.

3.7 Instrument Reliability

To ensure that the instrument gave the same results during its application, the researcher conducted a pilot test in the neighbouring sub-county and determined the Cronbach alpha of the instrument. A Cronbach's alpha of 0.891 was realised, which was considered adequate for the study.

3.8 Instrument Validity

Validity in terms of its accuracy and meaningfulness of inferences was determined by sharing the instruments with the supervisors and peers. The aim was to determine if the tool would measure what was intended as per research objectives and questions. The validity aspects included content, construct, and criterion.

3.9 Data Collection Procedure

A research permit was obtained from the National Council for Science Technology and Innovation (NACOSTI) within the Ministry of Higher Education, Science and Technology after obtaining an introductory letter from Africa Nazarene University. The households and the Key Informants were visited for familiarisation and permission to make inquiries was sought from them. Permission were also sought from the natural resource institutions to conduct the research by informing the institutions the purpose of the study in order to avoid any suspicion and to increase their confidence in giving information. The questionnaires were administered by the researcher with the help of research assistants. Prior to data collection, the respondents were informed of the purpose of the study and assured of confidentiality of information provided in order to promote their free and honest participation in the study. An atmosphere conducive to all the respondents was created by the researcher, to enable them open up and answer the questions asked truthfully.

3.10 Ethical Considerations

The researcher ensured that the respondents understand the process in which they were engaging in, including why their participation was necessary, how the data was to be used and to whom it was to be reported to. Voluntary informed consent was thus obtained from the participants. They understand and agreed to participate without any duress. The researcher also recognised the respondent's entitlement to privacy and accorded them their rights to confidentiality and anonymity. An assurance was also given to the respondents that none of the personal information provided would be divulged for whatever reason without their direct consent being sought.

3.11 Data Analysis

The study collected quantitative data using a structured interview schedule. The quantitative data was coded for entry into computer. Data was then analysed using both descriptive and inferential statistics within the Statistical Package for the Social Sciences (SPSS version 26). Descriptive analysis included the use of frequency tables, charts, measures of central tendency and dispersion (means, modes, median, variance and standard deviation and cross tabulation of categorical variables). Inferential statistics were used included chi-square tests. The summary of data analysis is given in Table 3.1.

Table 3.1
Summary of Data Analysis

Study objectives	Variables Involved	Statistical Methods used
i. To evaluate the contribution of the opening of large ranches for grazing by pastoralists to the socioeconomic wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.	Independent: opening of ranches to grazing Dependent: socioeconomic wellbeing	Descriptive statistics, Chi-square test
ii. To analyses the contribution of improvement of availability of water to the socioeconomic wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County	Independent: water improvement Dependent: socioeconomic wellbeing	Descriptive statistics, Chi-square test
iii. To assess the contribution of market creation to the socioeconomic wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County	Independent: market creation Dependent: socioeconomic wellbeing	Descriptive statistics, Chi-square test
(iv) To determine the contribution of the initiative to conserve and sustainability to utilise the natural resources on the wellbeing of the pastoral households in Laikipia North Sub-County	Independent: conservation and sustainable use Dependent: socioeconomic wellbeing	Descriptive statistics, Chi-square test

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents results and their interpretation on the contribution of peace initiative policy to the socioeconomic wellbeing of the households affected by the natural resource based conflicts in Laikipia North, Laikipia County. The chapter is divided into the following sections: (i) personal characteristics of the respondents, (ii) socioeconomic characteristics of the households, (iii) contribution of opening of ranches to grazing to wellbeing of households, (iv) contribution of provision of water to wellbeing of households, (v) contribution of market creation to the wellbeing of households, and (vi) contribution of conservation and sustainable use of natural resources to wellbeing of households.

4.2 Personal Characteristics of the Household Heads

The characteristics of the respondents interviewed have been organized in four categories namely age, gender, marital status, level of formal education, level of professional training and employment status. This form of categorization of respondents was envisaged to generate responses which are representative of the general view of the household members in Laikipia North sub-county where the research was conducted.

4.2.1 Age of the Household Heads

The household heads were asked to state the year they were born and the number of years was calculated from the information. The frequency distribution and the descriptive statistics of the respondents is given in Table 4.1.

Table 4.1
Age Distribution of the Respondents

Age Categories in Years	Frequency	Percent
20-30	90	42.7
31-40	67	31.8
41-50	32	15.2
51-60	17	8.1
61-70	4	1.9
above 71	1	.5
Total	211	100.0

Mean $35 \pm .68$, median 32, mode 30, Std. dev. 9.81, minimum 20, and maximum 72

The majority (74.5 %) of the household heads were below 40 years of age, while only 2.4 % were above 60 years of age.

4.2.2 Household Leadership Types

Two types of household leadership were encountered in the study area, they included the male headed households and the female headed households as shown in Table 4.2

Table 4.2
Type of the Households in the Study Area

Household type	Frequency	Percent
Male headed	116	55.0
Female headed	95	45.0
Total	211	100.0

The majority (55 %) of the households were led by men, while 45 % were led by women.

The percent of female headed households was high compared with other areas of Kenya.

4.2.3 Level of Formal Education

The household heads were asked to state the highest level of formal education they had attained. The information was then summarised and is presented in Table 4.3.

Table 4.3
Level of Formal Education Attained by Household heads

Level of Formal Education	Frequency	Percent
No formal education	84	39.8
Lower Primary	25	11.8
Upper Primary	38	18.0
Secondary school	39	18.5
Certificate	11	5.2
College Diploma	8	3.8
Bachelor Degree	6	2.8
Total	211	100.0

The household heads who had attained the secondary level of education and above (secondary, certificate, college diploma and degree) were 30.3 %.

4.2.4 Marital Status of the Household Heads

The marital status of the household heads in the study area was determined and the frequency distribution is given Table 4.4.

Table 4.4
Marital Status of the Household Heads

Marital Status	Frequency	Percent
Married	141	66.8
Single	44	20.9
Widow/ Widower	15	7.1
Divorced	9	4.3
Separated	2	.9
Total	211	100.0

The majority (66.8 %) of the household heads were married and living with their spouses, while 33.2 % were households that were being managed by a women household heads.

4.2.5 Occupation of the Household Heads

The respondents were asked to state the occupation they were engaged in for their livelihood. The information was analysed and is presented in the form of frequency distribution in Table 4.5.

Table 4.5
Type of Occupation the Household Heads were engaged in

Occupation of Household Heads	Frequency	Percent
Livestock keeping	97	46.0
Crop Farming	68	32.2
Self-employed (Business)	27	13.8
Teacher	8	3.8
Guard	6	2.8
County Administration	3	1.4
Managerial (NGO)	1	.5
Doctor	1	.5
Total	211	100.0

The household heads in the study area were engaged in eight different types of occupation. Livestock keeping was ranked as the most common (46 %) occupation followed by crop farming (32.2 %) and then self-employment in business (13.8 %). The remaining 9 % were in formal type of employment such as: teachers (3.8 %), guards (2.8 %), and county administration (1.4 %).

4.3 Socioeconomic Characteristics of the Households

The study sought to find out some socioeconomic characteristics of the pastoral communities as these were related to peace initiatives and their wellbeing. The following aspects were determined: land size owned by the households, type and number of livestock kept by individual households, and type of agricultural practices.

4.3.1 Land Size Owned by the Households in Laikipia North Sub-county

The pastoralists were asked to state the size of land that they owned and the information was summarised in Table 4.6.

Table 4.6
Land Size Owned by the Households in Laikipia North Sub-county

Size in Acres.	Frequency	Percent
0.00	39	18.5
0.50	1	.5
1.00	27	12.8
2.00	18	8.5
3.00	13	6.2
4.-10	14	6.6
11-25	8	3.8
50.00	4	1.9
100-300	51	24.2
400-500	11	5.3
700-1,000	12	5.7
2,000-6,000	8	3.8
20,000-500,000	5	10.5
Total	211	100.0

Mean 3,710±2434, median 5, mode 0, std. dev 35,368 min 0, max 500,000

The mean area of land owned by the households in the study area was 3,710 ha with a standard deviation of 35,368 ha, meaning that there was a very high variation in the size of land owned by the households. The range varied between 0 and 500,000. The main reason for this is that most of the household head were living in group ranches that are

owned communally. A significant percent (18.5 %) of the pastoralists did not own land, this means they are at the mercy of the peace initiative movement for assistance.

4.3.2 Type and Number of Livestock kept by the Households

The respondents were asked to state the number and type of animals they owned and kept on their land. The information was analysed and is presented in Table 4.7

Table 4.7
Descriptive Statistics of Livestock Types and Numbers owned by Households (Multiple Response Table)

Livestock	Mean	Std. Dev	Minimum	Maximum
Cattle	15 ± 1.8	26.75	0	217
Goats	43 ± 6.0	87.27	0	816
Sheep	47 ± 6.6	96.27	0	718
Poultry	4 ± 0.56	8.24	0	54
Camel	1 ± 0.42	5.99	0	72

Five different types of animals were kept by households in Laikipia North sub-county, they included: cattle, sheep, goats, poultry and camels. Majority of the households kept sheep and goats where the average number kept by the households varied between 43 and 718. Cattle averaged 15 animals per household.

4.3.3 Type of Agricultural Practices undertaken by Households

The household heads were asked to state the kind of agricultural activities they were involved in, the information was then analysed and is summarised in Table 4.8.

Table 4.8
Type of Agricultural Practices Undertaken by Households (Multiple Response Table)

Agricultural Activities	Frequency	Percent
Maize	51	24.2
Beans	39	18.5
Grazing large ranches	171	81.0

The majority (81 %) were involved in Livestock grazing of large ranches, while 42.7 % were involved in rained agriculture. In rained agriculture the farmers grew maize (24.2 %) and others beans (18.5 %). The reason for the selection of these agricultural practices is the low rainfall in these areas.

4.4. Peace Building Initiatives and Institutions

The Government and Non-governmental organizations (NGOs) peace policy initiative created peace building institutions to enhance peace in the area. These institutions included the following: (i) creation of police and chief camps, (ii) police patrols, (iii) NGOs livelihood and peace campaigns, (iv) provision of loans, (v) stakeholder involvement, (vi) creation of collective action groups for peace building, and (vii) communication initiatives.

The respondents were asked to rate all these peace building institutions and initiatives in terms of enhancing peace in the area and improving on the wellbeing of the individual households. The household heads were asked to rate using a 7-point semantic differential scale, which ranged between 1 and 7 (1 being *extremely low* contribution and 7 *extremely high* contribution). The individual scores were then summed up and a mean score was then calculated and used for comparison. The results are shown in Table 4.9.

Table 4.9
Rating of Peace Building Institutions and Initiatives by Household Heads in Laikipia North Sub-county

Peace Building Institutions and Initiatives	Score	Mean score
Creation of police and chief camps	898	4.25
Police patrols	822	3.89
NGOs livelihood and peace campaigns	734	3.47
Provision of loans	406	1.92
Stakeholder involvement	579	2.74
Ranch provision of scholarships	418	1.98
Creation of collective action groups for peace initiatives	772	3.65
Communication initiatives	692	3.29
Level of contribution to household wellbeing	665	3.14

n=211

The level of usefulness of the different peace building institutions were rated as 3.14 on a scale of 1 to 7. The institution and initiatives rated highly were creation of police and chief camps (4.25) and police patrols (3.89), while the lowly ranked ones were provision of loans (1.92) and provision of student scholarships by ranches (1.98).

4.5 Contribution of the Provision of Large Scale Commercial Ranches for Grazing on to the Wellbeing of Pastoral Households

The second objective of the study was to evaluate the contribution of the opening to pastoralists large scale commercial ranches for grazing to the wellbeing of households recovering from natural resource induced conflicts in Laikipia North Sub-County.

4.5.1 Provision of Large Scale commercial Ranches for Grazing by Pastoralists

The peace initiative policy in Laikipia implemented the provision of grazing pastoralists' animals in large scale commercial ranches in the County in order to initiate peace and enhance the wellbeing of the pastoral communities who had undergone conflicts with owners of the large scale commercial ranches.

The study identified the large scale ranches that were involved in this peace initiative policy from the household heads during the interview, the ranches identified and their frequency distribution are named in Table 4.10.

Table 4.10
Large Scale Ranches used for Animal Grazing

Large Scale Ranches	Frequency	Percent
Ol – Daiga	34	16.1
Mugie	24	11.4
Ol- Jogi	22	10.4
Laikipia	18	8.5
Borana	15	7.1
Segeera	13	6.2
A.D.C Mutara	12	5.7
Suyan	12	5.7
Sosian	10	4.7
Ol maisor	10	4.7
Njengi	10	4.7
Ngurare	7	3.3
Lopeseta	7	3.3
Olenaisho	5	2.4
Kifungo	4	1.9
Kivoko	3	1.4
Loisaba	3	1.4
Godana	1	.45
George mwai	1	.45
Total	211	100.0

The respondents identified nineteen (19) large scale ranches that were used for grazing under the peace initiative. The highly mentioned ranch was Ol-Daiga (16 %) followed by Mugie (11 %) and Ol Jogi (10 %).

The respondents were asked to estimate the distance they travelled from their homesteads to the ranches to graze their animals. The information was then summarized in a frequency distribution Table 4.11.

Table 4.11
Distances Travelled from the Pastoral Homestead to the Ranch for Grazing

Distance in Km.	Frequency	Percent
2.00	34	16.1
3.00	14	6.6
4.00	24	11.4
5.00	21	10.0
6.00	6	2.8
7.00	36	17.1
8.00	17	.9
10.00	12	5.7
11.00	2	8.1
12.00	24	11.4
13.00	2	.9
15.00	8	3.8
16.00	3	1.4
17.00	2	.9
20.00	6	2.8
Total	211	100.0

Mean $7.5 \pm .76$, median 5, mode 5, standard deviation 11.1, minimum 2, maximum 20

The average distance travelled by the pastoralists to the large scale ranches for grazing was estimated as 7.5 and the maximum distance travelled was 20 km. This fact improved on the distance the pastoralists moved their animals.

4.5.2 Determining the Contribution of Grazing Provision to the Wellbeing of the Pastoralists Households

The contribution to wellbeing of pastoral households by providing grazing to pastoralists' animals in large scale commercial ranches was determined by asking the pastoralists to rate (or gauge) the level of contribution of grazing provision to their household wellbeing based on 13 items that were used as the indicators of enhanced wellbeing status of the households using a 7-point semantic differential scale, which ranged between 1 and 7 (1 being *extremely low* contribution and 7 *extremely high* contribution). The individual scores for each of the 13 indicator items were added together and a mean was calculated. Then all the indicator mean scores were added

together to form an index of peace policy initiative contribution to the enhanced wellbeing of the pastoral households in Laikipia County (Heferon and Boniwell, 2011). The internal reliability of the created variable grazing contribution to wellbeing index using Cronbach alpha was found to be .822, which was found to be acceptable.

The total scores and mean ranks for the contribution of provision of grazing to the different items of wellbeing of pastoral households (WPH) were calculated. The descriptive statistics of the scores and mean ranks are summarised in Table 4.12.

Table 4.12
Pastoralists Perception of the Contribution of Grazing Provision to the Wellbeing of Households

Grazing Provision Contribution to	Score	Mean score
Improved Livelihoods		
Increased number of animals and milk	692	3.27
Increased crop production	623	2.95
Increased ecotourism activities and opportunities	898	4.25
Increased intervention by state agencies and NGOs		
Material inputs	757	3.58
Transfer of knowledge and skills for agriculture	695	3.29
Improved assets acquisition	669	3.17
Improved shelter/homesteads	707	3.35
Improved food security	852	4.03
Access to food (number of meals per day)	658	3.11
Enhanced collective action (groups)	772	3.65
Enhanced peace and security		
Peace of mind	751	3.55
No constant worry	788	3.73
Absence of fear	822	3.89
Level of household Wellbeing	736	3.48

n=211

The provision of grazing contribution to the wellbeing of the households affected by natural resource induced conflicts (Table 4.12) show that they contributed highly to improved food security (4.03), absence of fear (3.89) on a scale of 1-7.

The overall contribution of provision of grazing to the wellbeing of the pastoral households in Laikipia North sub-county was found to be 3.48 on a scale of 1-7, which was described as moderate.

The means of the resulting ranks were grouped into six (6) categories to indicate six levels of contribution to household wellbeing as follows: 1-1.99 very low contribution, 2-2.99 low contribution, 3-3.99 moderate contribution, 4-4.99 high contribution, 5-5.99 very high contribution, 6-7 extremely high contribution. The results are shown in Table 4.13.

Table 4.13: Frequency Distribution of the Variable Provision of Grazing

Scale	Description	Frequency	Percent
1-1.99	Very Low	23	10.9
2-2.99	Low	67	31.8
3-3.99	Moderate	43	20.4
4-4.99	High	42	19.9
5-5.99	Very High	35	16.6
6-7	Extremely High	1	.5
Total		211	100.0

The majority (63.1 %) of the household rating was between very low and moderate. The contribution of this peace initiative is there but a majority of the households had not experienced its contribution to their wellbeing.

A Chi-square test was performed to determine the equality of the groups based on the six categories, the scores for the provision of grazing were distributed as shown in Table 4.14.

Table 4.14**Chi-square Test for Equality of the Categories of Provision of Grazing to the Wellbeing of households in Laikipia North Sub-county**

Categories	Description	Observed		Residual	
		N	Expected N		
1-1.99	Very Low	23	35.2	-12.2	$\chi^2=69.29$
2-2.99	Low	67	35.2	31.8	df=5
3-3.99	Moderate	43	35.2	7.8	p<.001
4-4.99	High	42	35.2	6.8	
5-5.99	Very High	35	35.2	-.2	
6-7	Extremely high	1	35.2	-34.2	
Total		211			

The chi-square test for the variable contribution of the provision of grazing to the wellbeing of the households indicates that the majority of the households had a mean score that was at the level of low. This result was found to be statistically significant ($\chi^2 69.29$, $df 5$, $p < 0.001$). This is an indication that the initiative was rated lowly (low) by a majority of the households.

4.5 Contribution of Provision of Water to the Wellbeing of Pastoral Households

The third objective of the study was to assess the contribution of water provision to the wellbeing of pastoral households recovering from natural resource induced conflicts in Laikipia North Sub-County.

4.5.1 Provision of Water to Pastoralists

The peace policy initiative in Laikipia implemented the provision of water to pastoralists to water their animals in the County in order to initiate peace and enhance the wellbeing of the pastoral communities who had undergone conflicts with owners of large scale ranches.

The study identified the different water sources available to the pastoralists that were involved in this peace policy initiative from the household heads during the interview, the water sources identified and their frequency distribution are shown in a multiple response Table 4.15

Table 4.15
Sources of Water for the Pastoralists in Laikipia North Sub-County (Multiple response Table)

Sources of Water	Frequency	Percent	Distance travelled by Pastoralists to Water
River	118	55.9	1.4
Borehole and tank	110	52.4	2.3
Dam	83	39.3	2.77
Water pan	17	8.1	8.1

n=211

Four (4) sources of water were identified by the pastoralists. The nearest source of water for the pastoralists is the river, which is at an average distance of 1.4 km from their homesteads. The initiative increased more permanent water points and reduced the distance the pastoralists have to walk to water.

4.5.2 Determining the Contribution of the Provision of Water to Pastoralists on their Household Wellbeing in Laikipia County

The contribution to wellbeing of pastoral households by providing water at reasonable distance to pastoralists' animals was determined by asking the pastoralists to rate (or gauge) the level of contribution of water provision to their household wellbeing based on 13 items that were used as the indicators of enhanced wellbeing status of the households using a 7-point semantic differential scale, which ranged between 1 and 7 (1 being *extremely low* contribution and 7 *extremely high* contribution). The individual scores for each of the 13 indicator items were added together and a mean was calculated. Then all the indicator mean scores were added together to form an index of peace policy

initiative contribution to the enhanced wellbeing of the pastoral households in Laikipia County (Heferon and Boniwell, 2011). The internal reliability of the created variable water provision contribution to wellbeing index using Cronbach alpha was found to be .895, which was found to be acceptable.

The total scores and mean ranks for the contribution of provision of water to the different items making up the index of wellbeing of pastoral households (WPH) were calculated. The descriptive statistics of the mean ranks are summarised in Table 4.16.

Table 4.16
Pastoralists Perception on the Contribution of Water Provision to the Wellbeing of Households

Contribution of Water Provision to	Score	Mean score
Improved Livelihoods		
Increased number of animals and milk	973	4.61
Increased crop production	996	4.72
Increased ecotourism activities and opportunities	977	4.63
Increased intervention by state agencies and NGOs		
Material inputs	822	3.89
Transfer of knowledge and skills for agriculture	893	4.23
Improved assets acquisition	696	3.29
Improved shelter/homesteads	666	3.15
Improved food security	726	3.44
Access to food (number of meals per day)	654	3.09
Enhanced collective action (groups)	691	3.27
Enhanced peace and security		
Peace of mind	740	3.50
No constant worry	761	3.60
Absence of fear	749	3.54
Level of household Wellbeing	796	3.77

n = 211

The peace policy initiative to provide the pastoral households with water at short distances had a contribution of a mean of 3.77 on a scale of 1-7 to the wellbeing of the households affected by natural resource induced conflicts (Table 4.16), which was termed to be at the moderate level.

The means of the resulting ranks were grouped into six (6) categories to indicate six levels of contribution to household wellbeing as follows: 1-1.99 very low contribution, 2-2.99 low contribution, 3-3.99 moderate contribution, 4-4.99 high contribution, 5-5.99 very high contribution, 6-7 extremely high contribution. The results are shown in Table 4.17.

Table 4.17: Frequency Distribution of the Variable Provision of Water

Scale	Description	Frequency	Percent
1-1.99	Very Low	3	1.4
2-2.99	Low	11	5.2
3-3.99	Moderate	118	55.9
4-4.99	High	77	36.5
5-5.99	Very High	1	.5
6-7	Extremely High	1	.5
Total		211	100.0

The majority (62.5 %) of the household rating was between very low and moderate. The contribution of this peace initiative is there but a majority of the households had not experienced its contribution to their wellbeing.

A Chi-square test was performed to determine the equality of the groups based on the six categories, the scores for the provision of water were distributed as shown in Table 4.18.

Table 4.18
Chi-square Test for Equality of the Categories of Provision of Water to the Wellbeing of households in Laikipia North Sub-county

Scale	Description	Observed		Residual	Statistics
		N	Expected N		
1-1.99	Very Low	3	35.2	-32.2	$\chi^2=357.29$ $df=5$ $p<.001$
2-2.99	Low	11	35.2	-24.2	
3-3.99	Moderate	118	35.2	82.8	
4-4.99	High	77	35.2	41.8	
5-6.99	Very High	1	35.2	-34.2	
6-7	Extremely High	1	35.2	-34.2	
Total		211			

The chi-square test for the variable contribution of the provision of water to the wellbeing of the households indicates that the majority of the households had a mean score that was at the level of moderate. This result was found to be statistically significant (χ^2 357.29, df 5, $p < .001$). This is an indication that the initiative was rated moderately (Moderate) by a majority of the households.

4.6 Contribution of Creation of Markets to the Wellbeing of the Pastoralists in Laikipia County

The third objective of the study was to assess the contribution of market creation to the wellbeing of pastoral households recovering from natural resource conflicts in Laikipia North Sub-County.

4.6.1 Creation of Markets for the Pastoralists

The peace policy initiative in Laikipia North Sub-county created markets for the pastoralists to exchange their goods in order to initiate peace and enhance the wellbeing of the pastoral communities who had undergone conflicts with owners of large scale ranches. These were general markets that were used both as retailers and wholesale for livestock, crops, drugs for livestock, chemicals for crops and other household goods.

The pastoralist's household heads were asked to state the nearest market that was started under the peace policy initiative. The respondents were asked to estimate the distance from their homesteads to the market. The information was analysed to find out the average distance to the market and the frequency distribution shown in Table 4.19.

Table 4.19
Distance to Market Centres

Distance to Markets	Frequency	Percent
1.00	67	31.8
2.00	57	27.0
3.00	22	10.4
4.00	7	3.3
5.00	23	10.9
6.00	3	1.4
7.00	13	6.2
8.00	3	1.4
9.00	2	.9
10.00	14	6.6
Total	211	100.0

Mean 3.4±.18, median 2, mode 1, standard deviation 2.63, minimum 1 maximum 10

The nearest market centre for the pastoralists was at an average distance of 3.4 km from their homesteads. The majority (58.8 %) of the pastoralists had ~~water~~ markets within a 2 Km radius after the peace initiative of providing, markets this was a big achievement as this enable them to easily sale their animals, purpose other household goods and pay for services such as health care (human and animal).

4.6.2 Determining the Contribution of Market Centres to Wellbeing of Pastoral Households in Laikipia County

The contribution of the peace initiatives to the wellbeing of pastoral households by providing market centres to pastoralists was determined by asking the pastoralists to rate (or gauge) the level of contribution of market centres to their household wellbeing based on 13 items that were chosen as the indicators of socioeconomic wellbeing using

a 7-point semantic differential scale, which ranged between 1 and 7 (1 being *extremely low* contribution and 7 *extremely high* contribution). The scores for each of the 13 indicator items were added together and a mean calculated. Then all the indicator mean scores were added together to form an index of peace policy initiative contribution to the socioeconomic wellbeing of the pastoral households in Laikipia County (Heferon and Boniwell, 2011). The internal reliability of the created variable market centre contribution to socioeconomic wellbeing index using Cronbach alpha was found to be .931, which was found to be acceptable.

The total scores and mean ranks for the contribution of creation of market centres to the different items of wellbeing of households were calculated. The descriptive statistics of the mean ranks are summarised in Table 4.20.

Table 4.20
Pastoralists Perception on the Contribution of Market Centres to the Wellbeing of Households

Contribution of Market Creation to	Score	Mean score
Improved Livelihoods		
Increased number of animals and milk	780	3.69
Increased crop production	807	3.82
Increased ecotourism activities and opportunities	784	3.71
Increased intervention by state agencies and NGOs		
Material inputs	709	3.36
Transfer of knowledge and skills for agriculture	734	3.47
Improved assets acquisition	669	3.17
Improved shelter/homesteads	776	3.67
Improved food security	996	4.72
Access to food (number of meals per day)	977	4.63
Enhanced collective action (groups)	710	3.36
Enhanced peace and security		
Peace of mind	692	3.27
No constant worry	977	4.63
Absence of fear	822	3.89
Level of household Wellbeing	807	3.82

n = 211

The peace policy initiative to provide the pastoral households with market centres to provide an outlet for the pastoral products had a contribution of a mean of 3.82 on a scale of 1-7 to the wellbeing of the households affected by natural resource induced conflicts (Table 4.20), which was termed to be at the moderate level.

The means of the resulting ranks were grouped into six (6) categories to indicate six levels of contribution to household wellbeing as follows: 1-1.99 very low contribution, 2-2.99 low contribution, 3-3.99 moderate contribution, 4-4.99 high contribution, 5-5.99 very high contribution, 6-7 extremely high contribution. The results are shown in Table 4.21.

Table 4.21: Frequency Distribution of the Variable Provision of Market Outlets

Scale	Description	Frequency	Percent
1-1.99	Very Low	1	.5
2-2.99	Low	14	6.6
3-3.99	Moderate	103	48.8
4-4.99	High	91	43.1
5-5.99	Very High	1	.5
6-7	Extremely High	1	.5
Total		211	100.0

The majority (55.1 %) of the household rating was between very low and moderate. The contribution of this peace initiative is there but a majority of the households had not experienced its contribution to their wellbeing.

A Chi-square test was performed to determine the equality of the groups based on the six categories, the scores for the provision of markets were distributed as shown in Table 4.22.

Table 4.22
Chi-square Test for Equality of the Categories of Provision of Markets to the Wellbeing of households in Laikipia North Sub-county

Scale	Description	Observed			Residual	
		N	Expected N			
1-1.99	Very Low	1	35.2	-34.2	$\chi^2 = 331.81$ df = 5 p < .001	
2-2.99	Low	14	35.2	-21.2		
3-3.99	Moderate	103	35.2	67.8		
4-4.99	High	91	35.2	55.8		
5-5.99	Very High	1	35.2	-34.2		
6-7	Extremely high	1	35.2	-34.2		
Total		211				

The chi-square test for the variable contribution of the provision of markets to the wellbeing of the households indicates that the majority of the households had a mean score that was at the level of moderate. This result was found to be statistically significant ($\chi^2 = 331.81$, $df = 5$, $p < .001$). This is an indication that the initiative was rated moderately (Moderate) by a majority of the households.

4.7 Contribution of Conservation and Sustainable Use of Natural Resources to the Wellbeing of the Pastoralists in Laikipia County

The fourth objective of the study was to assess the contribution of conservation and sustainable use of natural resources to the wellbeing of pastoral households recovering from natural resource conflicts in Laikipia North Sub-County.

4.7.1 Creation of Natural Resources Conservation and Sustainable Use

The peace initiative policy in Laikipia County enhanced the conservation and sustainable use of natural resources by creating wildlife conservancies. The aim of the creation of the conservancies was to conserve the natural resources (wildlife, water vegetation and soils), while still gaining income from using the resources sustainably through ecotourism.

The study identified the number of pastoralists involved in this conservation and sustainably utilization of the resources by asking them to state if they were involved in conservancy or received income from this enterprise, this information is summarised in Table 4.23.

Table 4.23
Percent of Households involved in conservation and Sustainable Utilization of the Natural Resources

Households	Frequency	Percent
Involved Households	33	15.6
Households Not Involved	178	84.4
Total	211	100.0

Majority (84.4 %) of the households did not participate in this aspect of the peace initiative policy. The sizes of the conservancies were determined and the information is summarized in Table 4.24

Table 4. 24
Size of the Conservation Areas (Conservancies) in Laikipia North Sub-County

Size in Acres	Frequency	Percent
.00	178	84.4
62	1	.5
100	6	2.8
200	6	2.8
500	8	3.8
700	6	2.8
100,000	1	.5
200,000	2	.9
600,000	1	.5
700,000	1	.5
800,000	1	.5
Total	211	100.0

Mean 12,398, Median 0, Mode 0, Std. dev 85,845, Minimum 0, maximum 800,000

The size of the conservancies varied between 0 and 800,000, with a standard deviation of 85,845 indicating a high variation in the land sizes. The mean was 12,398.

The sustainable activities undertaken within conservancies were listed and are presented in the multiple response Table 4.25

Table 4.25: Activities Undertaken by the Pastoralists Related to Sustainable Use (multiple response Table)

Activities	Frequency	Percent
Tourist visits	22	10.4
Camp Sites	6	2.8
Accommodation at camp sites	17	8.1
Managing accommodation	7	3.3
Game drives	4	1.9
Involved in game drives	3	1.4
Birding	4	1.9
Management of birding	4	1.9

n= 211

Four main activities were identified that the pastoralists were involved in, these included: tourist visits, camp sites, game drives and birding. The people involved in these activities are few, they range between 1.4 % to 10.4 %.

4.5.2 Determining the Contribution of Conservation and Sustainable Use to the Wellbeing of Pastoral Households in Laikipia North Sub-county

The conservation and sustainable use of natural resources was one of the initiatives undertaken for peace and security. contribution to peace and socioeconomic wellbeing of pastoral households by providing market centres to pastoralists was determined by asking the pastoralists to rate (or gauge) the level of contribution of market centres to their household wellbeing based on 28 items that were chosen as the indicators of socioeconomic wellbeing using a 7-point semantic differential scale, which ranged between 1 and 7 (1 being *extremely low* contribution and 7 *extremely high* contribution). The scores for each of the 28 indicator items were added together and a mean calculated. Then all the indicator mean scores were added together to form an index of peace policy initiative contribution to the socioeconomic wellbeing of the pastoral households in

Laikipia County (Heferon and Boniwell, 2011). The internal reliability of the created variable market centre contribution to socioeconomic wellbeing index using Cronbach alpha was found to be .722, which was found to be acceptable.

The total scores and mean ranks for the contribution of creation of conservation and sustainable use of resources to the different items of wellbeing of households were calculated. The descriptive statistics of the mean ranks are summarised in Table 4.26.

Table 4.26
Pastoralists Perception on the Contribution of Conservation and Sustainable utilization to the Wellbeing of the Households

Contribution of Market Creation to	Score	Mean score
Improved Livelihoods		
Increased number of animals and milk	306	1.45
Increased crop production	293	1.38
Increased ecotourism activities and opportunities	286	1.35
Increased intervention by state agencies and NGOs		
Material inputs	295	1.39
Transfer of knowledge and skills for agriculture	285	1.35
Improved assets acquisition	293	1.38
Improved shelter/homesteads	343	1.62
Improved food security	319	1.51
Access to food (number of meals per day)	313	1.48
Enhanced collective action (groups)	271	1.28
Enhanced peace and security		
Peace of mind	319	1.51
No constant worry	296	1.40
Absence of fear	303	1.40
Level of household Wellbeing	301	1.42

n = 211

The peace policy initiative to conserve and sustainably utilise the natural resources had a contribution of a mean of 1.42 on a scale of 1-7 to the wellbeing of the households affected by natural resource induced conflicts (Table 4.26), which was termed to be at the very low level.

The means of the resulting ranks were grouped into six (6) categories to indicate six levels of contribution to household wellbeing as follows: 1-1.99 very low contribution, 2-2.99 low contribution, 3-3.99 moderate contribution, 4-4.99 high contribution, 5-5.99 very high contribution, 6-7 extremely high contribution. The results are shown in Table 4.27.

Table 4.27: Frequency Distribution of the Variable Provision of Market Outlets

Categories	Description	Frequency	Percent
1-1.99	Very Low	178	84.4
2-2.99	Low	2	.9
3-3.99	Moderate	21	10.0
4-4.99	High	10	4.7
Total		211	100.0

The majority (84.4 %) of the household rating was very low. The contribution of this peace initiative was low in its contribution to the wellbeing of the pastoral households. A Chi-square test was performed to determine the equality of the groups based on the six categories, the scores for the conservation and sustainability of the natural resources were distributed as shown in Table 4.28.

Table 4.28
Chi-square Test for Equality of the Categories of Provision of Conservation and Sustainability of Natural Resources to the Wellbeing of households

Scale		Observed N	Expected N	Residual	Statistics
1-1.99	Very Low	178	52.8	125.3	$\chi^2=399.97$
2-2.99	Low	2	52.8	-50.8	$df=3$
3-3.99	Moderate	21	52.8	-31.8	$p<.001$
4-4.99	High	10	52.8	-42.8	
Total		211			

The chi-square test for the variable contribution of the provision of conservation and sustainability of natural resources to the wellbeing of the households indicates that the majority of the households had a mean score that was at the level of very low. This result was found to be statistically significant (χ^2 399.97, df 3, $p < .001$). This is an indication that the initiative was rated very low by a majority of the households.

CHAPTER FIVE

DISCUSSIONS, COMNCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, a discussion of the findings based on the study objectives, conclusions and recommendations related to the research objectives were provided.

5.2 Discussions

This section provided a discussion of the findings in the following manner;

- (i) Socio- economic characteristics of the sampled population
- (ii) Contribution of the opening of large ranches for grazing by pastoralists to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.
- (iii) The contribution of improved water availability to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.
- (iv) Contribution of market creation to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.
- (v) contribution of the peace initiative of conserving and sustainably utilising the natural resources on the wellbeing of the pastoral households in Laikipia North Sub-county

5.2.1 Socio-economics Characteristics of the Sampled Population

The study found a significant number of women headed households in the area, a fact that corresponds with the county statistics (County Government of Laikipia, 2018). This could be attributed to impact of previous incidences of insecurity where men participate and often loss their lives. Conflicts are known to result in death and destruction households' dynamics and gender roles. (Buvinic, et al., 2012).

This finding is significant in terms of targeting beneficiaries of peace initiatives aimed contributing to the wellbeing of the households recovering from natural resource conflicts in Laikipia North Sub-County. This was also bound to affect the management of peace and livelihood provision as pastoral communities often have low opinion of women and believe that they should not inherit land and animals. They occupy the lowest decision-making options and capabilities - often being obligated to follow whatever decision men make whether it affects them positively or negatively (Balehey, Tesfay, & Balehen, 2018). In pastoral areas, women are known to be both victims and perpetrators of resource-based conflicts. They also play important role in the management natural resources from which draw their essential household needs such as water, food and energy (UNEP, 2013). Therefore, peace policies initiatives that focus on improving of these category of population by enhancing their participation conflict management is justified as they bound to have a higher effect (Worku, & Debela Hunde, 2016).

The study found that most of the household heads live in communally owned group ranches which is part of the peace policy initiatives the project area. The significantly significant percent of the pastoralists who did not own land. More studies are required to establish the specific cause for such significant number of landless in the study area. However, this could be a reflection of profound historical inequalities in land ownership in Laikipia County where 40.3% of the land is said to be controlled by 48 individuals (Mbaria, 2017). It helps to emphasis the fact that peace policy initiatives should aimed to address the challenge of pastoralists face in access to land for their grazing. However, previous studies have shown that one of the negative effects of group ranches is disfranchising land ownership or access to marginalizing pastoral households.

Pastoralist livestock herd structure in the study area seems to be changing in favour of small stock. It was found that the majority of the households kept sheep and goats. This may be partly due livestock raiding which is characteristic inter-ethnic conflicts and partly due to effects of climate change where cattle are more affected than small stock (Kagunyu & Wanjohi, 2014).

The high percentage of households involved in grazing their livestock in large ranches highlights the positive effect of peace policy of encouraging increased access by pastoralists to group ranges. However, it is also important to note that a significant proportion (42.7%) were also involved in rain fed agriculture despite the limited availability of rainfall. Such diversification driven for the households to be more resilient in times of shocks posed by resource based conflicts or climate change (Achiba, 2018).

5.2.2 Contribution of Grazing Provision by Large Ranches to the Wellbeing of Households in Laikipia North Sub-County

The opening of large ranches for grazing by pastoralists significantly contributed to the wellbeing of the households recovering from natural resource conflicts in Laikipia North Sub-County. It addressed lack of equitable access and sharing of key resources of pasture found within the conservancies and ranches which was one of the root cause between group ranch and conservancy owners and the pastoralist. Increased access to grazing satisfied pastoralist's household's major need, enhancing peace and wellbeing (Schrijver, (2019)). The 19 ranches in the area reduced the distance travelled by pastoralists in search of pasture especially during droughts when there is scarcity of pasture and water. Previously, lack of enough pasture and water for pastoralists due severe droughts and degradation or enclosure of communally owned land, pushed many

traditional nomads to move onto private ranches resulting deadly clashes. Two of the outcomes of these clashes is food insecurity and fear – which are the two parameters that ranked highly among the pastoralist households interviewed has have been reduced through the opening of large ranches for grazing.

Easy access to pasture and water for pastoralists animals reduces pressure on the animals – thus increasing their productivity. It also allows more time for pastoralists to engage in other productive activities. However, the contribution of peace policy initiative to parameter was ranked by the majority of the households as low to moderately-which was statistically significant. This may indication that majority of the pastoralists households had not experienced the contribution this initiative to their wellbeing. It may also be reflection of the long historical land ownership contestation that has been a source of friction often with politicians fuelling the conflict by instigating invasions into land that belong to ranchers and partly a legacy of Kenya's colonial past (Mwanza, 2018)

5.2.3 Contribution of the Provision of Water to the Wellbeing of Pastoralists in Laikipia North Sub-county

The availability of water to the pastoralists significantly enhanced the wellbeing of the households recovering from natural resource conflicts in Laikipia North Sub-County. Water is a scarce commodity in the sub-county and the pastoralists had to walk long distances in search of it. Therefore, the provision of water enhanced their wellbeing and reduced conflicts. Water and pasture are the most important natural resources on which pastoral livelihoods relies on (Omosa, 2005). Studies have shown that distribution of dry season water in the area influence the distances livestock herds travelled from their homelands (Opiyo, Mureithi, & Ngugi, 2011).

Laikipia north County is one the most active corridors of livestock enroute to pastures and terminal markets. Scarcity of water along these corridors poses a major challenge to herders, often resulting into conflicts. Peace Policy initiatives have resulted in an increase of more permanent water points thus reducing the distance pastoralists have to walk in search for it for their livestock and households. The nearest source of water for the pastoralists in study are is a river, which is at an average distance of 1.4 km from their homesteads. While, according to National Drought Management Authority's Drought Monitoring and Early Warning bulletin of September 2013, the average distances from water sources to grazing areas for pastoralists in Laikipia North was 1.75 km and the highest was 2 km. The reduced distance to water source has a positive impact to the wellbeing of the pastoralists as they are able to have enough time to engage in other productive active.

According to the Regional Pastoral Livelihoods Resilience-Kenya investment in construction of water pans one of the key factors that ensures peace and increase livelihood security of people of Laikipia north (<http://www.resilience.go.ke/laikipia/>). Musyimi (2016) also found that the creation of collective action groups dealing with water, forestry and grazing enhanced biodiversity conservation and natural resource management in Laikipia. However, the perception of the pastoralists on the overall contribution of peace policy initiative to the wellbeing of households was rated moderate. Majority of the households interviewed, rated the contribution at between very low and moderate. This shows that although the peace policy initiative was contributing to improvement of pastoralist's wellbeing, the majority of the households had not experienced it. This is an illustration of how importance access to water is in the study area

A study by Bond (2014) found that land ownership and access to the pasture and water on land was central to conflicts in Laikipia county. Ameso, Bukachi, Olungah, Haller, Simiyu Wandibba., & Nangendo (2018), reported that during the drought season, pastoralists are often forced to make informal agreements with private ranches through their group ranch chairmen to have their livestock access to water when they are grazing in the private ranches. The availability of water to the pastoralists significantly enhanced the wellbeing of the households recovering from natural resource conflicts in Laikipia North Sub-County.

5.2.4 Contribution of Creation of Markets to the Wellbeing of the Households in Laikipia North Sub-County

The creation of market centres for the pastoralists provided them with easy access to inputs and markets to dispose of their animals and also reduce the distance they had to travel to access the markets. This study found that the Peace Policy initiatives had a positive impact on the wellbeing of the pastoral communities. Access to livestock markets is a key factor in determining resilience of pastoralists livelihoods and wellbeing (Aklilu & Catley (2010). Pastoralist's local economy heavily relies on livestock and its products. However, pastoralists often find it difficult to access markets as they have to trek over long distances to reach their nearest markets. An analysis Strength, Weakness Opportunity and Threats of the beef cattle value chains by Gichuki, Njiru, & Kipchirchir (2017) in four pastoral counties including Laikipia found that absence of market infrastructure along livestock trek routes and livestock markets was one of the weakness of the value chain. Peace policies initiatives that focus on develop markets, market infrastructures, governance and information system have enable pastoralists easily sell the animals and buy goods for their households. Thus initiating peace and enhancing the wellbeing of the pastoral communities who had undergone

conflicts with owners of large scale ranches. The markets are used both as retailers and wholesale for livestock, crops, drugs for livestock, chemicals for crops and other household goods. (Onyango, Trant & Baraza, 2008). The creation of market centres for the pastoralists provided them with easy access to inputs and markets to dispose of their animals and also reduced the distance they had to travel to access the markets. Thus A majority of the pastoralists can now access markets.

However, overall contribution of Market Centres to their wellbeing, ranked a mean score of moderate. A frequency distribution showed that the majority (55.1 %) of the households rated the contribution between very low and moderate. More studies are required to find out why the pastoralists perceptions was rated that low. However, it can be postulated that the majority of the households had not experienced the benefits of Peace Policy initiatives to their wellbeing. An opportunity exists for incorporating other activities to livestock market development such peacebuilding activities. Okumu (2013) found that markets can be used as entry points for peace inter-dialogue for pastoralists who share a common market in Laikipia County.

5.2.5 Contribution of the Conservation and Sustainably Utilization of Natural Resources to the Wellbeing of Households in Laikipia North Sub-county.

The contribution of the peace initiative to the improved conservation and sustainably utilisation of the natural resources and the wellbeing of the pastoral households who were recovering from natural resource conflict in Laikipia North Sub-county was found to be very low. Peace policy initiative in Laikipia is aimed at improving the lives of Laikipia's people by bringing communities together to conserve and sustainably use the natural resources through setting up of public and private conservancies and facilitating access by pastoralists to pastures and water in these conservancies during the drought

period (USID, 2014). Private and public conservancies in Laikipia North have helped to conserve natural resources such as endangered wildlife, water, vegetation and soils while enabling owners to earn some income (Muchapondwa. & Stage, 2015). Pastoralists are involved in managing and sustainably utilizing natural resources in these conservancies through activities such as tourist visits, camp sites, game drives and bird watching.

The very low pastoralists perception on the contribution of peace initiative to their wellbeing could explained by the fact that the people involved in these activities were very few, ranging between 1.4 % to 10.4 %. Another factor could be that some of the conservation strategies such community owned wildlife conservancy competes with pastoral livestock production (Ogada, 2016). Many of the conservancies in Laikipia are treated and run as privately properties under either individual ownership or group management committees. The latter often faces many governance challenges such as weak governance, with the majority of members being detached from the operations of the conservancy. Community participation, sharing of the benefits by Community leaders may ultimately erode trust and support for the Conservancy model (King, Kaelo, Buzzard & Warigia, 2015).

5.3 Conclusions

The following was concluded from the findings of this study:

- (i) The opening of large ranches for grazing by pastoralists was found to have a significant contribution to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.

- (ii) The improvement water availability to pastoralists was found to have a statistical significant contribution to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.
- (iii) The creation of markets for pastoralist was found to have a statistical significant contribution to the wellbeing of households recovering from natural resource conflicts in Laikipia North Sub-County.
- (iv) The initiative to conserve and sustainably utilise the natural resources had a statistical significant contribution to the wellbeing of the pastoral households in Laikipia North Sub-county

5.4 Recommendations

The following recommendations were suggested in order to improve on the wellbeing of the pastoral communities:

The peace policy initiatives that were focussed on improving the livelihoods of the people were found to have a higher significant contribution to the wellbeing of the pastoralists. The study therefore recommends a plan that will enhance these initiatives to bring out a change in the wellbeing of the households. The plan will focus on three aspects related to the wellbeing of the pastoralists, these include: provision of grazing, water accessibility and market creation.

Creation and strengthening collective action groups related to peace initiatives and livelihood improvement, this will enable proper discussion and peace related activities which have to focus on the whole community. The collective action groups will also be used to enhance passing technical knowledge and skills to be used to improve the

pastoral and agricultural livelihoods. The skills will include: fodder production, marketing, loan usage, savings and insurance cover for their animals.

Livelihood diversification can be encouraged so that the pastoralists diversify their livelihood options from livestock related activities to other activities such as ecotourism, business, and irrigated crop agriculture.

Infrastructure development to improve communication and access to the area. The National and County Governments and Development actors need to improve infrastructure in the area. This will enhance peace patrols and communication with the community.

5.5 Recommendations for Further Studies

The study focused only on one (1) county, Laikipia North Sub-county, there is need of extending the study to the surrounding pastoral tribes (Samburu, Turkana, Isiolo and Baringo). There is an opportunity to examine other livelihood strategies even in other areas.

REFERENCES

- Abaho, A. (2020). Human Needs Satisfaction and Conflict Prevention in Africa. *Open*
- Abbass, I. M. (2014). No retreat no surrender conflict for survival between Fulani pastoralists and farmers in Northern Nigeria. *European Scientific Journal, ESJ*, 8(1).
- Academy of Sciences (2005). *Valuing Ecosystem Services: Toward Better*
- Achiba, G., A. (2018). Managing livelihood risks: Income diversification and the livelihood strategies of households in pastoral settlements in Isiolo County, Kenya. *Pastoralism: Research, Policy and Practice* (2018) 8:20 <https://doi.org/10.1186/s13570-018-0120-x>
- Aklilu, Y. & Catley, A. (2010). *Mind the Gap, Commercialization, Livelihoods and Wealth Disparity in Pastoralist Areas of Ethiopia*, December, 2010. Tufts University. Feinstein International Centre & UKaid.
- Ameso, A. E., Bukachi, S. A., Olungah, C.O., Haller, T., Simiyu Wandibba, S., & Nangendo, S. (2018) Pastoral Resilience among the Maasai Pastoralists of Laikipia County, Kenya *Land* 7:78; doi:10.3390/land7020078 www.mdpi.com/journal/land. Correspondence: edwin_ameso@yahoo.com. Analysis of Social Networking Services Continuous. *Journal of Services Management*. Vol 24:170- 190.
- Azar, E. E. (1990). *The Management of Protracted Social Conflict: Theory and*
- Babiker, M. (2001). Resource Competition and Conflict: Herder/Farmer or Pastoralism/Agriculture? *African Pastoralism: Conflict, Institutions, and Government*, 134-44
- Balehey, S., Tesfay, G., & Balehegn, M. (2018). Traditional gender inequalities limit pastoral women's opportunities for adaptation to climate change: Evidence from the Afar pastoralists of Ethiopia. *Pastoralism: Research, Policy and Practice* (2018) RESEARCH Open Access. <https://doi.org/10.1186/s13570-018-0129-1>
- Beaver, W., & Cohen, E. 2004. Power in A Rural County. *Sociological Spectrum*, 24(6), 629-650.
- Berkes, F., (2004). Rethinking Community-Based Conservation. *Conservation Biology*, 18 (3): 621–630.
- Bollig, M., Schnegg, M., & Wotzka, H. P. (Eds.). (2013). *Pastoralism in Africa: past, present and future*. Berghahn Books.
- Bond, J. (2014). A holistic approach to natural resource conflict: The case of Laikipia County, Kenya. *Journal of Rural Studies*, 34, 117-127.

- Burton, John W., ed. 1990. *Conflict: Human Needs Theory* London: Macmillan and New York: St. Martin's Press.
- Cao, H; Jiang, J.; Oh L -B; Li H. and Liao.X. (2013) *A Maslow Hierarchy of Needs Cases*. Hampshire; Dartmouth Publishing
- Castro, A. P., & Nielsen, E. (Eds.). (2003). *Natural resource conflict management case studies: an analysis of power, participation and protected areas*. Food and Agriculture Organization of the United Nations.
- Catley, A., Lind, J., & Scoones, I. (Eds.). (2013). *Pastoralism and development in Africa: dynamic change at the margins*. Routledge.
- Church, C. And Elster, J. (2002). *Thinking Locally, Acting Nationally: Lessons For*
- County Government of Laikipia (2018) *Laikipia County Integrated Development Plan. Empowered Participatory Governance. Journal of Development Studies Environmental Decision-Making*. The National Academies Press. Washington, DC. USA.
- Fratkin, E. (2001). East African pastoralism in transition: Maasai, Boran, and Rendille cases. *African Studies Review*, 44(3), 1-25.
- Fung, A. And Wright. E. 2003. *Deepening Democracy: Institutional Innovations In*
- Gichuki T., Njiru J., & Kipchirchir T. (2017). *Alternative Value Chains to Livestock in Baringo, Isiolo, Laikipia and Samburu Counties. Feasibility Report*. The Presidency. Ministry of Devolution and Planning. Management & Development Consultants. March 2017
- Gitau Mbaria, G. (2017). *The Laikipia Crisis and the Disenfranchisement of Kenyans in the North. The Elephant - Speaking truth to power*. <https://www.theelephant.info/features/2017/05/18/the-laikipia-crisis-and-the-disenfranchisement-of-kenyans-in-the-north/>
- Hablemitoglu, S, Ozkan. Y. & Purutcuoglu,. E. (2010). *The Assessment of the Housing*
- Haro, G. O., Doyo, G. J., & McPeak, J. G. (2005). Linkages between community, environmental, and conflict management: Experiences from Northern Kenya. *World development*, 33(2), 285-299.
[Http://Www.Simplypsychology.Org/Maslow.Html](http://www.simplypsychology.org/Maslow.html)
in the Theory of Maslow's Hierarchy of Needs. *European Journal of Social Sciences* Vol 16:222-228.
Journal of Social Sciences, 8, 1-17
- Kagunyu, A., W. & Wanjohi, J. (2014). *Camel rearing replacing cattle production among the Borana community in Isiolo County of Northern Kenya, as climate variability bites. Pastoralism: Research, Policy and Practice 2014*, <http://www.pastoralismjournal.com/content/4/1/13>. Pastoralism Springer Open Journal

- Khaemba, J. (2014). *Inter-ethnic conflicts on the border lands of Kanyarkwat and kwanza locations of trans-nzoia and west Pokot Counties-Kenya* (Doctoral dissertation, Moi University).
- King J., Kaelo D., Buzzard B. & Warigia G. (2015). *Establishing Conservancy in Kenya: a guide for Private Land Owners and Community*. Kenya Wildlife Conservancies Association.
- Knox, A., Meinzen-Dick, R. & Hazell, P. (1998). Property Rights, Collective Action and Technologies for Natural Resource Management. System-Wide Program On Property Rights and Collective Action *International Food Policy Research Institute*
- Laikipia-Resilience. Regional Pastoral Resilience Project-Kenya. <http://www.resilience.go.ke/laikipia>
- Lucey, T. (1997). Improving The Access of Smallholders to Agricultural Services in Sub-Saharan Africa. *Small Enterprise Development*, 8(3), 35-41.
- Maiteny, P. T. (2002). Mind in The Gap: Summary of Research Exploring 'Inner Influences On Pro-Sustainability Learning and Behaviour.
- Markakis, J. (2004). *Conflict and the Decline of Pastoralism in the Horn of Africa*. Macmillan.
- Mcleod, S. A. (2014). Maslow's Hierarchy of Needs. Retrieved From
- Meier, P., Bond, D., & Bond, J. (2007). Environmental influences on pastoral conflict in the Horn of Africa. *Political Geography*, 26(6), 716-735.
- Middlemiss, L. (2011). The Effects of Community-Based Action for Sustainability On Participants' Lifestyles. *Local Environment*, 16(3), 265-280.
- Mkutu, K. A. (2008). *Guns and governance in the rift valley: pastoralist conflict and small arms African issues*. Oxford: James Currey.
- Muchapondwa E., & Stage J. (2015) Where to with institutions and governance challenges in African wildlife conservation? *Environ. Res. Lett.* 10 095013
- Musyima, J.M. (2016) *Improving natural resource management and biodiversity conservation in the Laikipia county ecosystem, Kenya*. In Yaw Agyeman Bofo & Kaoru Ichikawa (eds) UNU-IAS & IR3S/UTIAS 2016, Socio-ecological production landscapes and seascapes (SEPLS) in Africa. United Nations University Institute for the Advanced Study of Sustainability, Tokyo.
- Mwanza, K (2018). Deadly ranch invasion shows land-use conflicts in Kenya – experts. Reuters Big Story. Thomson Reuters Foundation. Nairobi, Kenya. Nov. 28, 2018 / 6:05 PM

- Narayan, D. (1999). *Can Anyone Hear Us? Voices of The Poor From 47 Countries. National Policy from Work on Local Sustainability*. York Joseph Rowntree Foundation
- NDMA (2013). Laikipia County Drought Monitoring and Early Warning Bulletin – September 2013 National Drought Management Authority, Nairobi. Kenya
- Ogada, M.O. (2018). Conservation for tourism in Kenyan rangelands: a new threat to
- Okech, R., (2010). Wildlife-community conflicts in conservation areas in Kenya, *African Journal on Conflict Resolution Volume 10, Number 2, 2010*. African Centre for the Constructive Resolution of Disputes (ACCORD). Mt Edgecombe, 4320, South Africa.
- Okumu W. (2013). Trans-local Peace Building among Pastoralist Communities in Kenya: The Case of Laikipia Peace Caravan Cologne 2013. Culture and Environment in Africa Series. Edited by the Cologne African Studies Centre Issue 3
- Oladele O.T., and Oladele O.I., (2011). Effect of Pastoralist-Farmers Conflict on Access to Resources in Savannah Area of Oyo State. *Nigeria Life Science Journal*. 2011. 8(2).
- Omosa, E., K. (2005). The Impact of Water Conflicts on Pastoral Livelihoods. The Case of Wajir District in Kenya August 2005. International Institute for Sustainable Development (IISD). <http://www.iisd.org>
- Onyango D., Trant H. & Baraza K. (2008). Comprehensive study of the livestock marketing system in Samburu District, Kenya. Examining the unique Revenue Sharing Model between the County Council and Livestock Marketing Associations in the district. SNV & Quantum Africa LTD. Livestock Markets Study 2008, Nairobi Kenya
- Opiyo F. E. O., Mureithi, S. M., & Ngugi, R.K. (2011). The Influence of Water Availability on Pastoralist's Resource Use in Mwingi and Kitui Districts in Kenya. *Journal of human ecology (Delhi, India)* · July 2011. DOI: 10.1080/09709274.2011.11906389
Oxford University Press
- Pantuliano, S. (2010). Oil, land and conflict: the decline of Misseriyya pastoralism in Sudan. *Review of African Political Economy*, 37(123), 7-23.
pastoral community livelihoods. In Yaw Agyeman Boafo & Kaoru Ichikawa (eds) UNU-IAS & IR3S/UTIAS 2016, Socio-ecological production landscapes and seascapes (SEPLS) in Africa. United Nations University Institute for the Advanced Study of Sustainability, Tokyo.
- Pellis, A., Pas, A., Duineveld, M. (2018). The Persistence of Tightly Coupled Conflicts. The Case of Loisaba, Kenya. *Conservation and Society* 16(4): 387-396.

- Pkalya, R. Adan, M., & Masinde, I., (2003); *Conflicts in Northern Kenya; A Focus on the Internally Displaced Conflict Victims in Northern Kenya*, ITDG-EA Nairobi, Kenya
- Roe D., Nelson, F., Sandbrook, C. (eds.) 2009. *Community management of natural resources in Africa: Impacts, experiences and future directions*. Natural Resource Issues No. 18, International Institute for Environment and Development, London, UK
- Schilling, J., Opiyo, F. E., & Scheffran, J. (2012). Raiding pastoral livelihoods: motives and effects of violent conflict in north-western Kenya. *Pastoralism: Research, Policy and Practice*, 2(1), 25.
- Schrijver, A., P. (2019). Pastoralists, Mobility and Conservation Shifting rules of access and control of grazing resources in Kenya's northern drylands. Academic dissertation for the Degree of Doctor of Philosophy in Geography with Emphasis on Human Geography at Stockholm University to be publicly defended on Thursday 10 January 2019 at 13.00 in Högbomsalen, Geovetenskapens hus, Svante Arrhenius väg 12. Second County Development Plan (2018-2022).
- Sheriff G.I (2004). Global terrorism: An African perspective. *Journal of Political Studies*. Abuja Nigeria. Family Communication Press. 2004. Vol. 1 No. 1 p. 231.
- Tyler, S. R. (1999). Policy implications of natural resource conflict management. In *Cultivating peace: Conflict and collaboration in natural resource management*. IDRC, Ottawa, ON, CA.
- UNEP (2013). Women and Natural Resources. Unlocking the Peacebuilding Potential. The United Nations Environment Programme, United Nations Entity for Gender Equality and the Empowerment of Women, United Nations Peacebuilding Support Office and United Nations Development Programme © 2013, UNEP, UN Women, PBSO and UNDP ISBN: 978-92-807-3361-7 Job No.: DEP/1761/GE Series editors: David Jensen and Silja Halle
- Waikenda, J. W. (2017). The concept of environmentally - induced conflict: A case study of northern Kenya, 1963-2012. *International Academic Journal of Arts and Humanities*, 1 (1), 159-250
- Weible, C. M. (2005). Beliefs and perceived influence in a natural resource conflict: An advocacy coalition approach to policy networks. *Political Research Quarterly*, 58(3), 461-475.
- Worku, G.Z., & Debela Hunde, D., F. (2016). Natural Resource Use Conflicts: Gender Opportunities and Constraints in Conflict Management: A Review. *J. Biol. Chem. Research* Volume 33 (2) 2016 Pages No.836-846; *Journal of Biological and Chemical Research*. An International Peer Reviewed / Referred Journal of Life Sciences and Chemistry; Published by Society for Advancement of Sciences

APPENDICES

APPENDIX A: Questionnaire

My name is Jacob Barasa Wanyama a Master of Science student undertaking a course in environment and natural resource management at the Africa Nazarene University (ANU) and am currently collecting data for my thesis. The study is entitled “assessment of the contribution of peace policy to the livelihood status of households affected by natural resource based conflicts in Laikipia north sub-county, Laikipia County, Kenya”. Your household has been randomly selected for interview. The data collected will be only used for academic purposes only.

I. Personal Characteristics of the Household Head

(i) Age of respondent _____

(ii) Gender of Respondent (Tick)

Male----- female-----

(iii) Level of education

None____; Lower primary____; Upper primary ____; Secondary ____;
Certificate____ college diploma ____; university degree____; master’s degree
_____ and PhD _____.

(i) Marital status

Married ____; Single____; Divorced/ separated____; Widowed/widower_____

(v) Occupation (State)

II. Land

a. Land size _____ha

b. Land tenure type (Tick):

Owned with title ____; owned without title____; Borrowed____ communally
owned ____; Family owned ____; rented____; Others (specify)

III. Animals owned by Households

Animal	Number	Breed: local/imported	For commercial use	For domestic use
Cows				
Goats				

Sheep				
Poultry				
Camels				
Others (specify)				

IV. Crops Grown by the household

Crop	Ha	Production	
Maize			
Beans			

V. Provision of Grazing in Large farms

i. Are there ranches that have been opened for grazing which are available to you for grazing your animals? Yes ____; No _____.

(ii) Give the particulars of the ranches:

Name of ranch	Distance from our home (Km)	Available area (ha)	Enhance peace Yes/No	Improve on livelihood (Yes/No)

(iii) Perception on level enhancement to peace and livelihood by grazing availability

Policy Contribution in	Level of enhancement				
	Low extent 1	2	3	4	Large extent (5)
Peace Enhancement					
Livelihood					

Enhancement					

VI. Improvement on Water Availability

(i) Particulars on water;

Type of facility	Distance to source	Storage facility	Owner of facility
Borehole			
River			
Water pan			
Dam			

(ii) Perception on level enhancement to peace and livelihood by water availability:

Policy Contribution in	Level of enhancement				
	Low extent 1	2	3	4	Large extent (5)
Peace Enhancement					
Livelihood Enhancement					

VI. Conservation and Sustainability of Natural Resources

(i) Do you have wildlife conservancies in your area? Yes ____; No ____

(ii) What is the size of the conservancy in hectares? _____

(iii) Size of the conservancy can be viewed as:

Very large ____; Large ____; medium ____; small ____; very small ____.

(iv) Do you have tourist activities in your area? Yes ____; No ____.

(v) Tourist numbers _____

(vi) Particulars of the tourist activities:

Type of facility	Distance to facility	Are you involved in running it	Any income from the facility
Camp sites			
Accommodation			
Game drives			
Birding			

(vii) **Perception on level enhancement to peace and livelihood by natural resource conservation and sustainability:**

Policy Contribution in	Level of enhancement				
	Low extent 1	2	3	4	Large extent (5)
Peace Enhancement					
Livelihood Enhancement					

VII. Peace Building Institutions

- (i) Are you a member of a collective action group? Yes _____; No _____.
- (ii) Number of groups you are a member to _____
- (iii) Particulars of groups in the area:

Type of groups:	Member (yes/No)	Number in group	Activities
Water			
Grazing			
Financial			
Livestock			
Crops			
Burial			
Peace			
Tourism			
Natural resource management			

(iv) **Perception on level enhancement to peace and livelihood by peace building institutions:**

Policy Contribution in	Level of enhancement				
	Low extent 1	2	3	4	Large extent (5)
Peace Enhancement					
Livelihood Enhancement					

VIII. Creation of Markets

(i) Were markets created for sale of natural resource products? Yes/No

(ii) Particulars of markets:

Type of market	Distance to market	Size of the market	How are you involved in it?
Livestock			
Crops			
General			

(iii) Perception on level enhancement to peace and livelihood by markets:

Policy Contribution in	Level of enhancement				
	Low extent 1	2	3	4	Large extent (5)
Peace Enhancement					
Livelihood Enhancement					

IX. Perceptions on the peace initiatives

Rate on a scale of 1 to 7 how the different peace initiative activities contribute to the following aspects of your wellbeing of your household.

Grazing Provision Contribution to	Score (1 to 7)
Improved Livelihoods	
Increased number of animals and milk	
Increased crop production	
Increased ecotourism activities and opportunities	
Increased intervention by state agencies and NGOs	
Material inputs	
Transfer of knowledge and skills for agriculture	
Improved assets acquisition	
Improved shelter/homesteads	
Improved food security	
Access to food (number of meals per day)	
Enhanced collective action (groups)	
Enhanced peace and security	
Peace of mind	
No constant worry	
Absence of fear	

Rate on a scale of 1 to 7 how the different peace initiative activities contribute to the following aspects of your wellbeing of your household.

Water Provision Contribution to	Score (1 to 7)
Improved Livelihoods	
Increased number of animals and milk	
Increased crop production	
Increased ecotourism activities and opportunities	
Increased intervention by state agencies and NGOs	
Material inputs	
Transfer of knowledge and skills for agriculture	
Improved assets acquisition	
Improved shelter/homesteads	
Improved food security	
Access to food (number of meals per day)	
Enhanced collective action (groups)	
Enhanced peace and security	
Peace of mind	
No constant worry	
Absence of fear	

Rate on a scale of 1 to 7 how the different peace initiative activities contribute to the following aspects of your wellbeing of your household.

Markets Provision Contribution to	Score (1 to 7)
Improved Livelihoods	
Increased number of animals and milk	
Increased crop production	
Increased ecotourism activities and opportunities	
Increased intervention by state agencies and NGOs	
Material inputs	
Transfer of knowledge and skills for agriculture	
Improved assets acquisition	
Improved shelter/homesteads	
Improved food security	
Access to food (number of meals per day)	
Enhanced collective action (groups)	
Enhanced peace and security	
Peace of mind	
No constant worry	
Absence of fear	

Rate on a scale of 1 to 7 how the different peace initiative activities contribute to the following aspects of your wellbeing of your household.

Conservation and sustainable use of natural resources Contribution to	Score (1 to 7)
Improved Livelihoods	
Increased number of animals and milk	
Increased crop production	
Increased ecotourism activities and opportunities	
Increased intervention by state agencies and NGOs	
Material inputs	
Transfer of knowledge and skills for agriculture	
Improved assets acquisition	
Improved shelter/homesteads	
Improved food security	
Access to food (number of meals per day)	
Enhanced collective action (groups)	
Enhanced peace and security	
Peace of mind	
No constant worry	
Absence of fear	

THANK YOU

Appendix B: Photographs from the Field



Figure 1: Training Research Assistants on Tools in Rumuruti Town



Figure 2: Cattle being watered at a drinking trough.



Figure 3: cattle in a makeshift crush



Figure 4: Boy herding Dorper sheep on accessed Conservancy



Figure 5: Water storage tank in one of the Community Conservancies\



Figure 6: Water Storage in one of the Private Conservancies



Figure 7: Water pan in one of the conservancies access by Pastoralist



Figure 8: camels carrying goods

Appendix C: Approval Letter from Nazarene



AFRICA NAZARENE
UNIVERSITY

12th June, 2018


RE: TO WHOM IT MAY CONCERN


Wanyama Jacob Barasa 17JO1DMEV007 is a bonafide student at Africa Nazarene University. He/She has finished his/her course work and has defended his/her thesis proposal entitled *"Assessment of the contribution of peace policy to the livelihood status of households affected by natural resource based conflicts in Laikipia north sub-county, Kenya"*

Any assistance accorded to him/her to facilitate data collection and finish his/her thesis is highly welcomed.

Prof. Rodney Reed
Deputy Vice Chancellor, Academic Affairs


Appendix B: NACOSTI Permit


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