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Report on Climate Change-Induced Conflicts and Migration in Kenya

Final Report

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This research is part of the special initiative on forced migration by the Rosa Luxemburg Stiftung (RLS)

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Climate change is considered to be one of the most serious threats as it has close association with conflicts and migration. On this regard the Institute for Climate Change and Adaptation (UoN) appreciates Rosa Luxemburg Stiftung for their financial support in carrying out this research.

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List of Acronyms

ACTED	Agency for Technical Cooperation and Development
ASALs	Arid and Semi-Arid Lands
APEDI	Adakar Peace and Development Initiative
CDC	Conservation Development Centre
CEWARN	Conflict Early Warning
CRECO	Constitution and Reform Education Consortium
CRED	Centre for research on the Epidemiology of Disasters
DFID	Development for International Development
FGDs	Focus Group Discussions
IDMC	Internal Displacement Monitoring Centre
IFAD	International Fund for Agricultural Development
IISD	International Institute for Sustainable Development
IOM	International Organization for Migration
IMC	International Medical Corps
IPCC AR1	1st Assessment Report of Intergovernmental Panel on Climate Change
KII	Key Informant Interviews
KRCS	Kenya Red Cross Society
KNBS	Kenya National Bureau of Statistics
LULC	Land use Land cover
NRC	Norwegian Refugee Council
NPPBCM	National Policy on Peace Building and Conflict Management
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNISDR	United Nations International Strategy for Disaster Reduction

EXECUTIVE SUMMARY

Only 20 percent of the land in Kenya is arable whilst the rest of the country in the northern, north eastern and much of the southern areas are arid and semi-arid lands (ASALs) which constantly experience incessant conflicts especially over pasture and water resources. These areas experience unpredictable, non-equilibrium weather conditions. Against this background, nomadic pastoralism is the dominant livelihood system. Migration as an adaptation and coping mechanism leads to competition over the dwindling natural resource base. The scarcity results in violent inter-community conflicts leading to migration.

Lately, there has been an increase in migration trends both in space and time among pastoralists causing severe competition resulting into conflicts which hinder accessibility to critical resources. Inter-communal conflicts have been exacerbated by dwindling land and water resources as well as socio-political, economic and cultural factors alongside institutional oversights such as drawing communal boundaries without consideration to pastoralist's mobility needs.

This study mapped conflicts within the Kenyan territory; identified and mapped cross-border conflicts; analyzed key implications of conflicts on community and national level with a particular focus on climate change-related conflicts as well as conflicts caused by forced migration. Two counties, Turkana and Samburu were selected for detailed study based on the number of frequencies of conflicts, migration and displacement of persons. Furthermore, based on the climate change related disasters recorded in the counties over the past 30 years. The study provides recommendations on best practices of preventing and /or resolving climate change related conflicts through peaceful mechanisms. These were realized through desk top study focusing on historical trends or even present situation of conflicts, precipitation patterns and land cover changes over the past 30 years. Conflict and migration data were collected through a participatory learning and action approach from the communities, information was also sought from experiences from key informants and institutions working with the communities on issues of conflicts and migration. Through the exercises, it was noted that there is an emerging correlation between climate variability and violent conflict in Northern Kenya, where most conflicts were resource based. Thus, up scaling the findings from the two case studies to regional, national or elsewhere will be insightful for forward perspective in the future. It was evident land use had changed

significantly as reflected in the species composition in both counties' shrinking forests. In addition, precipitation was associated with increased variability as witnessed in the increased frequency of droughts over the last 10 year with shorter cycles of about 3-5 years. Moreover, the study noted a correlation between droughts and conflicts; these conflicts have led to displacement of communities, loss of livelihood and migration. Moreover, migration is influenced by the search for opportunities and in other instances; there has been forced migration due to incessant cycles of conflicts. The key findings are summarized below:

- Conflicts are overlaid by many drivers such as political-economic factors, cultural practices, institutional factors and natural resource however; climate change has exacerbated the conflicts.
- Conflicts in the past 10 years have increased during periods of scarcity such as the 2004 and 2009 drought which were manifested by a number of conflicts. In Samburu, incursions by the Borana, Pokot and Somali communities were on the rise leading to conflicts in Amaya sub-location, Archer's post, Kauro, Parkati, Suguta valley and the Baragoi area. In Turkana, conflict in Kaputir, Loima, Todenyang, Nadapal and Oropoi had conflicts turning violent as a result of resource conflict between the Pokot, Karamojong, Merille and the Toposa.
- Cross border conflicts by communities in Uganda are among the Pokot from Uganda and Karamojong who include the Jie, Dodoth, Bakora, Ngitepes and the Ik where conflicts occur along the border and the aggressors move into Kenya. Areas such as Oropoi, Lokiriama, Lorrengkippi, and Loima are hotspots for conflicts.
- On the South Sudan Border, the Toposa and the Ik have had long running conflicts with the Turkana and Nadapal where Soila Hills are flash points of conflicts. In the Ethiopian Border, Kibish area has had conflicts due to its status as a disputed land (Ilemi triangle). Recently, the conflicts have become resource based since the area is well endowed. The Todenyang conflict is between the Nyangatom, Merille and the Turkana pastoralists who are competing for the natural resources.
- Migration in Turkana is forced; in the Nadapal conflict belt, some Turkana pastoralists have migrated south to Lokichoggio, Kakuma and Lodwar due to the volatility of the area. In Lokiriam and Lorengkipi, there are migrations into Uganda since the Ugandan side is better endowed and there is security. Turkana also migrated further south into Samburu County in search of resources. Some of them have settled in Suguta, Amaya and Baragoi because these areas offer better conditions.

- In Samburu County, Migrations have been caused by violent conflicts over diminishing natural resources and political-economic processes. The conflicts in Baragoi, Amaya and Suguta valley have led to displacement of Turkana pastoralists in Samburu County. Conflicts in Baragoi have caused migrations into Maralal town and displacement settlements in protected lands (Leroghi forest) which have negative impact on the environment.

The study also noted that mitigation and adaptation to Climate Change has been mainstreamed recently with the formulation of a draft policy on Climate Change in 2014. However, the climate change response strategy (2010) did not explicitly highlight Climate Change induced conflicts and migration and response strategies considering ASAL counties are faced with conflicts over access to natural resource. Therefore, the study recommends the full adoption of various policies most of which are at draft stage to help mitigate Climate Change Induced conflicts and migration. Moreover, the study also noted that the country's current legal framework is still fragmented; hence the need for single framework to deal with climate change induced impacts in a coherent manner rather than the ad hoc management which has proved to be ineffective.

CHAPTER ONE

1 INTRODUCTION

1.1 Background of the Study

According to (Nina & Martina, 2014) around 27 million people are displaced globally by climate and weather related disasters each year. The greatest single impact of climate changes might be on human migration (IPCC, 1990). (Shamsuddoha & Chowdhury, 2009) also noted that by 2050, 150 million people could be displaced by climate change related phenomena like desertification, increasing water scarcity, floods and storms. Africa has had the largest share of such impacts (254 droughts in 30 years), followed by Asia and Latin America (AAAS, 2000).

Kenya is situated in eastern part of the African continent, bordering Ethiopia, Somalia, Sudan, Uganda, Tanzania and the Indian Ocean. The country has a total area of 582,646 Sq. Km, with a land area of 571,466 Sq Km. Only 20 percent is arable, along the narrow tropical belt in coast region, the highlands east and west of Rift Valley and the lake basin lowlands around Lake Victoria. The arable area accommodates a large proportion of the population which has increased greatly from 2.5 million in 1897, rising to 5.4 million by 1948 (KNBS, 2010). During the first post-independence census in 1969, population was estimated at 10.9 million, and increased to 38.6 million by the time of the 2009 census (KNBS, 2010). The status of Kenya population (KNBS, 2010) reveals rapid population growth. This was first noted in 1960 and has since resulted in increasing pressure on land and other natural resources. The consequences are: loss of forest cover, land degradation, dwindling water resources and emerging climate change (NCPD, State of Kenya Population 2009, 2010 a). The population is estimated at 42 million and it is expected to reach 60 million by 2030 (NCPD, Kenya Population Situation Analysis, 2013). According to (CRED, 2002) in the period 1975-2001 Kenya was among the most affected countries by effects of climate change. The northern, north eastern and much of the southern areas are arid and semi-arid lands (ASALs), primarily covered by scattered bushes and shrubs. They are predominantly used for pastoralism and wildlife conservation. According to (Shamsuddoha & Chowdhury, 2009), migration is considered to be the intermediate stage which links environmental degradation and disasters to conflict. Against this background, conflicts related to natural resources such

as land and water are prevalent. Other causes of conflict are such as traditional e.g. cattle rustling, clan or tribal conflicts, and political representation.

Since the 1960's, Africa has experienced a general warming trend with certain regions experiencing more warming than others (Boko, Niang, & Nyong, 2007). According to (King'uyu, Ogallo, & Anyamba, 2000), Kenya has experienced general rise in temperatures. Moreover, high evapo-transpiration rate reduces surface water especially in the northern Kenya where pastoral system is dominant. Despite the fact that pastoralists have been migrating in the past in search of water and pastures, conditions have become much tougher as the region is prone to frequent episodes of droughts forcing them to venture beyond their original migration zones. During migration, they encounter hostile communities who resist invasion in order to protect resources within their borders. This has led to incessant conflicts and migrations in the arid and semi-arid lands (ASALs).

Repeated reporting of these conflicts in these communities indicates either the absence of suitable conflict resolution mechanisms and approaches, or their ineffective implementation. Many communities resort to violence as a way of "managing" their conflicts without sustainably resolving them. Use of violence increases tension between the involved communities, causing fear among community members and inevitably forcing people (in particular women, children and other vulnerable groups) to leave their homeland.

Considering that the environment is already stressed, it is most likely that the number of conflicts and casualties will increase, causing more people to take refuge. However, there is still a lot of hesitation by the international community to acknowledge the existence of climate refugees and their eligibility to seek asylum. Kenya like many other Africa countries is yet to ratify the Kampala convention on Internally Displaced Persons[1]. This framework may address displacement caused by natural disasters that influence human life, peace, stability, security and development. Thus, the implementation of such frameworks is essential to improving the Government's response to the protection needs of IDPs.

UNFCCC recognizes climate change as one of the greatest human rights challenge of our time (Human Rights Watch, 2015). Similarly, Stockholm and the Rio Declaration have acknowledged the link between environmental quality and the human rights.

Kampala convections, a creation the African Union with a mandate to address the root causes and create legal framework for preventing internal displacement. has been signed by 40 ,ratified by 24 of the 54 member states as of 2015

1.2 Objective of the Study

This research intends to generate reliable information that will contribute towards accumulation of research-based information on climate change using Kenyan case. It envisions influencing the creation of national, regional and international policies on climate change induced conflicts and migration.

1.2.1 Specific Objectives

This research study will be guided by the following specific objectives to:

a) Identify and map conflicts within the Kenyan territory that are mainly driven by climate change
b) Identify and map cross-border conflicts that are mainly driven by climate change
c) Analyze the key implications of conflicts on community and national level with a particular focus on climate change-related conflicts and conflicts caused by forced migration;
d) Provide recommendations on best practices of preventing and /or resolving climate change related conflicts through peaceful mechanisms.

1.3 Scope of study

This research study will analyze the policy and legal framework around internal violent conflicts in Kenya, identify key opportunities and gaps in preventing or resolving such conflicts within the legal and policy framework, identify and analyze what types of conflict resolution mechanisms are available and applied. Which ones have shown positive results or failed, identify and analyze climate change related conflicts; analyze how climate change impacts lead to violent conflicts in Kenya and if they are the main causes, or if they are connected with other relevant causes, how they could be mitigated and which approaches of conflict management could be applied; establish the number of casualties and displaced people and their regional distribution; classify conflicts in Kenya according to identifiable criteria, identify parties involved in conflicts and the roles they play; draw general conclusions from the key findings in the study which focuses on root causes of climate change-induced migration; mutual reinforcement of climate change and other causes of violent conflicts; non-violent conflict management mechanisms applied so far; expectations of conflict parties regarding alternative conflict solving approaches; and to provide recommendations based on the findings of the study.

CHAPTER TWO

2 METHODOLOGY

2.1 Introduction

This report was generated out of desk top review of various data sources of conflicts mapping and meteorological data. Thereafter, field surveys were carried out focusing on Turkana and Samburu counties. During this time stakeholder consultation took place with both key informants and the locals between 26th January and 5th February, 2016. The targeted stakeholders for the interview included organizations working in development sectors, security and livelihood as captured in (Appendices 2 and 4) while FGDs in (Appendices 3 and 5) targeted the locals with experiential knowledge of conflicts and migrations. The participating community members were drawn from all the sub-counties across two vast counties to offer unbiased representation. Among the participants were elders born before independence, middle aged and youthful populations from both genders.

The key informants were interviewed at their respective offices while local community members were organized into workshop settings where they participated in Focus Group Discussions and Participatory Learning and Action Activities. These approaches realized the two conflict maps for both Turkana and Samburu (Figures 13 and 22). Through the exercise, community members were able to map out key natural resource areas, conflict hotspots, actors, causes of conflict and emerging migration trends. Furthermore, they narrated traditional and cultural practices linked to conflicts and how the communities survived through tremendous natural odds, extreme events and disasters. Also captured were historical timelines related to key climatic events which have been presented in tables in the report. These engagements provided first-hand information on the nature of past conflicts/events and timelines creating a better understanding on the overall outlook in regards to conflicts and migration.

The study also employed conflict sensitivity tools i.e. conflict trees to systematically understand the conflicts and conflict-sensitive screening to assess the effectiveness/ appropriateness of existing strategies and emerging strategies. This involved extensive discussion, involving the locals in context to identify the main issues associated with conflict

and classifying them according to the core problem, its underlying causes and the subsequent effects that defined and shaped conflicts in the region and the actors involved.

Furthermore, it mapped out violent conflicts which were mainly caused (or reinforced) by climate change and leading to internal or cross-border migration or conflicts caused by migration as result of climate change and leading to violence within the Kenyan territory.

2.2 Conflict Mapping

Conflict data sources included news articles from both electronic and print media since late 1980's to 2014. Most of which had been captured through the following consolidated data sources.

- Uppsala University Data Base Program
- SCAD- Social conflict analysis data base
- ACLED-Armed conflicts location and event data project
- Ancillary data were captured from ILRI e.g. roads, rivers, administration boundaries etc.

The process involved geo-referencing point sources of conflict within Kenyan territory since 1989-2014. The hotspots for conflicts were identified in the 47 Counties. However, study could not segregate these conflicts due to the conflict dynamics considering the composite root causes.

2.3 Resource Mapping

The study employed LULC using dry season imagery (January – March, July – September) when skies are clear. The long term satellite monitoring of vegetation through remote sensing realized spatial-temporal changes in land use since 1979-2015. These were classified as: forest land, cultivated land, bare land, grassland, shrub land, wetland, water body, riverine, built up / settlement as shown in (Figure 5, 6 and 16, 17) for Turkana and Samburu counties respectively. Through this process, the study detected significant change in land use and land cover over the past 30 years. Figure 1 below shows the processes used to create maps (Figure 5, 6 and 16, 17).

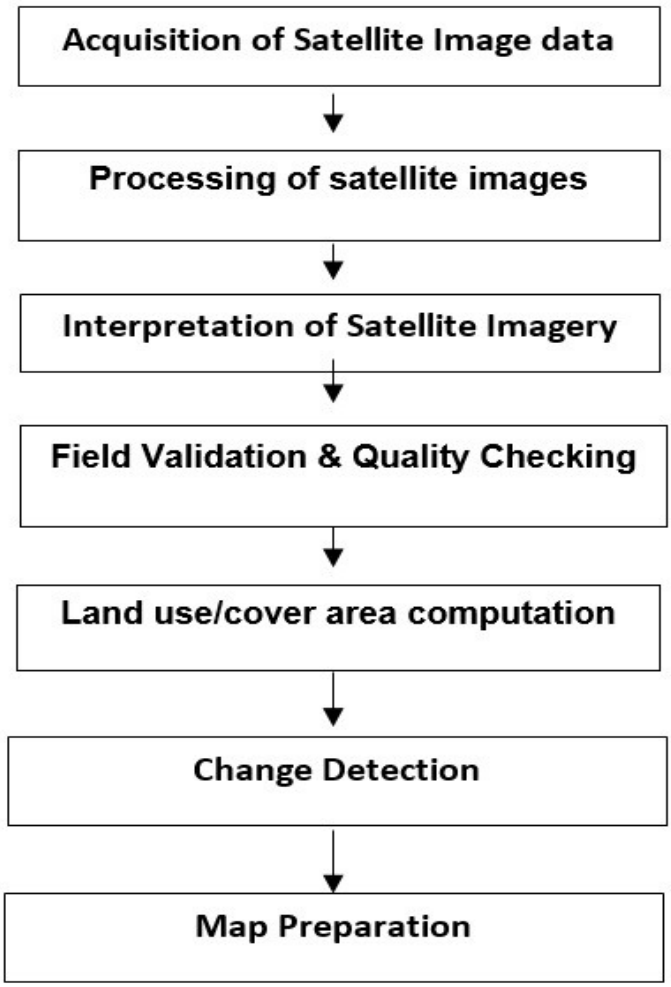

Figure 1: land use land cover process

2.4 Precipitation Analysis

The study utilized chirps data (Geoclim data set) from 1981-2014 to capture trends and extreme weather variability over the past 30 years.

CHAPTER THREE

3 LEGAL AND POLICY FRAMEWORK ANALYSIS

3.1 Introduction

The successful policies involve lessening vulnerability, increasing resilience and coping mechanisms as well as improving emergency aid, as is evidenced by accounts of communal versus public lands in East Africa and pastoral common areas in the Sahel zone (UNEP, Livelihood Security, Climate Change, Migration and Conflict in the Sahel, 2011).

Kenya is already vulnerable to existing climate variability because of its high-dependency on natural resources and low-adaptive capacity to cope with climate-related impacts. To ascertain this, it is important to note a few examples of such impacts as:

(a) The cost of climate change is estimated to be 2.6% of Kenya GDP each year by 2030.
(b) The costs of the 1998/2000 drought were estimated at US$2.8 billion. In some regions, up to one third of all livestock perished due to the most recent drought.
(c) Four (4) million people in Kenya are at risk of hunger because of the prolonged drought.

Against this background, building resilience to the impacts of climate change such as frequent or prolonged droughts and flash flooding in the arid and semi-arid areas of Kenya should have been given priority.

3.2 Legal and policy interventions put in place by the Kenyan government

The national government has been working on a number of appropriate policies, legal and institutional framework to enhance resilience. Among them are at least 90 national policies and laws that are relevant to climate change including regulations, by-laws and other statutory instruments extending down to the local level. Some of these policies have been outlined below:

3.2.1 Climate change policies in Kenya

Kenya's membership to the East African Community requires her to create an enabling environment through domestication of policy, legislative and institutional frameworks in line with the East Africa Climate Change Policy framework. These include developing climate change policies, strategies and institutional arrangements as well as putting the

necessary legal and institutional architecture in place. In response to the wide ranging sectoral approach to Climate Change, Kenya has developed a number of policy and strategies to guide its climate change interventions:

3.2.1.1 National Climate Change Response Strategy

The National Climate Change Response Strategy (NCCRS, 2010) was the first Kenyan national policy document to fully acknowledge climate change. It also reaffirms the need to enhance coordination of climate change activities in the country with a view to ensuring a climate-proof socioeconomic development anchored on a low-carbon path. The policy further offers guidelines on what needs to be done in terms of climate change adaption, measures on how to respond to climate change and vulnerability affecting various aspects of the economy including food security, water resources, livestock, agriculture, land management, forest and energy. Strategy drawn from sectoral climate change response activities and budgeted Action Plans of various line ministries. It recommends modalities on relevant policies, institutional framework, awareness creation and mobilization of resources, of dealing with climate change (GoK, 2010). It further, refers to displacement as a result of sudden and slow-onset disaster impacts and predicts an increase in population movements.

3.2.1.2 National Climate Change Action Plan 2013-2017

National Climate Change Action Plan (NCCAP) addresses the options for a low-carbon climate resilient development pathway as Kenya adapts to climate impacts and mitigates growing emissions. It also addresses the enabling aspects of finance, policy and legislation, knowledge management, capacity development, technology requirements and monitoring and reporting (GoK, 2013).

3.2.2 Peace initiative policies in Kenya

The government of Kenya is committed to peace processes at the County, regional, national and international levels. This has been shown through ratification of international and regional treaties/protocols on matter of peace and security. Moreover, reviews are carried out on a regular basis in line with international and regional legislation in order to promote coherence, coordination and cooperative governance. Furthermore, the government in its effort to foster peace continues to provide policy, technical and financial support to the peace agenda in the country. The County governments also play a major role in supporting peace processes through integrating peace in County Integrated Development Plans (CIDPs). These promote inclusiveness, integration and cohesion.

In addition, Draft National Policy on Peace Building and Conflict Management (NPPBCM) which aims at enabling Kenya to prepare for and administer domestic as well as cross-border conflicts by integrating all conflict and peace building activities across the range from pre-conflict, open conflict to post conflict stages of the conflict life cycle (GoK, 2011).This policy framework also provides strategic direction at national and sub national level for instance National Steering Committee (NSC) which was established in 2001 as an inter-agency committee comprising peace, security and development stakeholders. This committee brings stakeholders together as a holistic approach to conflict prevention, management and resolution aimed at strengthening peace and security in the country through various structures and initiatives including: National Cohesion and Integration Commission to promote national unity in Kenya and National Human Rights and Equality Commission to ensure that Human Rights of every Kenyan are protected. The Government has also mainstreamed peace education, alternative dispute resolution (ADR) mechanism, resettlement programs, disarmament and control of illicit arms.

Further measures includes: the National Conflict Early Warning and Early Response Unit (CEWERU) under the Inter-Governmental Authority on Development's (IGAD) conflict Early Warning (CEWARN) mechanism which is mandated to implement the CEWARN protocol. NSC has also strengthened local level responsiveness and capacity building in handling conflicts situations. NSC works in partnership with CEWARN, USAID, PACT and Act Change to develop a number of peace and conflict profiles to track conflict trends and dynamics.

3.2.3 Natural Resource Based Policies

Kenya has made significant progress in developing a comprehensive land-related framework. However, land still remains one of the major causes of conflict (ICM, August 2013; TJRC, May 2013; OHCHR, February 2012). According to Article 260 of the Constitution of Kenya, 2010 land includes but not limited to the surface of the earth and the sub surface rock; any body of water on or under the surface; marine waters in the territorial sea and exclusive economic zone; natural resources completely contained on or under the surface; and the air space above the surface. Land and the land-based resources form the basis for the realization of human security, human rights and human development in the society. However, the skewed governance of land-based resources has occasioned unprecedented conflicts, violations and afflictions in the society.

Furthermore, the National Land Commission was formed in 2013 to act as the lead agency in land matters. It has since developed a five-year national plan to guide implementation of the National Land Policy. However, this has faced major challenges due to lack of coordination and prioritization within the different sectors and actors involved in land reforms. However, most frameworks are in draft forms and lack of the political goodwill to fast track their implementation.

The Water Act, 2002 which was enacted to provide for the management, conservation, use and control of water resources and for the acquisition and regulation of rights to use water; to provide for the regulation and management of water supply and sewerage services; to repeal the Water Act (Cap. 372) and certain provisions of the Local Government Act; and for related purposes. The Act vests every water resource in the State subject to any rights of user granted by under this Act or any other written law.

The Act established the Water Resources Management Authority, whose functions include inter alia: to develop principles, guidelines and procedures for the allocation of water resources; and to receive and determine applications for permits for water use. Additionally, the Authority may, with the consent of the Attorney-General given under the Criminal Procedure Code, undertake the prosecution of any offences arising under this Act or in connection with the performance of its functions.

The Act also provides for the Water Appeal Board which hears appeals from any person who is dissatisfied with the preliminary allocation of permit for water use. The Water Appeal Board also determines the amount of compensation to be paid to a permit holder whose permit is cancelled or varied under the Act where there is default of agreement of such amount between the permit holder and the Authority.

The Integrated Water Resource Management (IWRM) approach is also a different process which promotes the coordinated development and management of water, land and related resources in order to maximize economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and the environment. The basis of IWRM is that the many different uses of finite water resources are interdependent. Such interdependence may easily generate conflict among the various groups of persons who may be using the water for various uses. For instance, two communities that live in the same area

may have differing needs for water resources which may be a source of conflict. A pastoralist community may have disagreements with another one that are farmers and who may use the water for irrigation.

To avert such situations, Integrated Water Resources Management (IWRM) approach that has now been adopted internationally as the way forward for efficient, equitable and sustainable development and management of the world's limited water resources and for coping with such conflicting demands, has been incorporated under this Draft national water policy as one of the guiding principles therein. However, most of the ASALs still face water resource challenges, especially uneven water distribution, lack of data on season water flow that can allow proper planning and water management.

3.2.4 Draft National Policy on IDPs

This policy provides for a comprehensive approach to addressing internal displacement caused by conflict, other forms of violence, natural disasters and development projects, irrespective of IDPs' location and ethnic background. However, there has been no progress in implementing the Act or moving the national policy beyond the draft stage. Moreover, the UN Special rapporteur on the human rights of IDPs in his 2012 report on Kenya noted the tendency not to consider pastoralist groups as displaced because they are by definition mobile (OHCHR, February 2012).

3.2.5 Citizen Act 2011

According to this Act, all Kenyan citizens have a right to enter, exit, remain in and reside anywhere in Kenya; the right to own land and other property in any part of the country, in accordance with the law. Chapter four on the bill of rights enshrines human rights and gender provisions which have both broad and specific applications in the management of the land-based resources. The right to property among others depends more on the access to land and land based resources.

3.2.6 The National Disaster Management Policy 2009

This policy governs disaster management and it is relevant to the prevention of and response to displacement caused by disasters. The national disaster response plan is already in place, linked to the Vision 2030 development strategy for northern Kenya and other arid lands. Despite these measures, the study noted the need for a more comprehensive policy to promote management of cross border natural resource especially with the current

environmental stress limiting access to water and pasture. However, this may face considerable setback due to lack of political will.

CHAPTER FOUR

4 RESULTS AND DISCUSSIONS

4.1 Overview of climate change/natural resource conflicts in Kenya

According to (Reuveny, 2007) underdeveloped societies are at high risk of environmental problems which have accumulated changes such as rising sea levels, land degradation, and declining freshwater resources resulting to relatively more permanent and dispersed effects. Such societies are relatively more likely than developed societies to exit the affected area, because they are highly vulnerable, as is the case in Least Developed Countries (LDCs) whose borders were carved by colonial powers leading to a push effect of societies to more resourceful areas which over time result to conflicts over dwindling resources.

This study realized that competition for natural resources is the root cause of conflicts. A study by (UNEP, Livelihood Security, Climate Change, Migration and Conflict in the Sahel, 2011) in the Western Sahel region which found that small-scale conflicts among individuals and groups who depend on natural resources for their livelihoods are a consequence of control and ownership of land and natural resources. (Caterina & Klos, 2015) Also noted that the current conflicts and displacements have been reinforced by a number of factors and key among them are the changing climate regimes. For instance, in Wajir and Garissa Counties, climate change has dramatically increased the region's vulnerability to droughts and floods. This has imperiled the rather fragile livestock based livelihoods and ruled out possibilities of sedentary agriculture. Conflicts over resources (pasture and water) are on the rise as influx of refugees from Somalia intensifies population pressures in the County (CRECO, 2012).

Mandera County which is located on the North Eastern tip of Kenya and borders Somali on the Eastern side and Ethiopia on the Northern is arid with few water resources. It has only one permanent river (River Dawa) flowing from southern Ethiopian highlands down through Mandera into southern Somalia and the rest of the County is served by water pans, natural springs and boreholes, which are owned by resident communities. During dry periods when scarcity worsens, community elders usually come up with complex schedules for sharing the water resources. Failure by a group to adhere to these schedules usually results into conflict. Access to pasture is usually a negotiated process involving elders from concerned communities.

Marsabit County borders Wajir, Isiolo, Samburu and Turkana Counties all of which are arid and semi-arid. Marsabit County is dry with the exceptions of small patches of mountainous arable areas in central and northwestern parts. As such, natural resource-based conflicts over pasture and water are prevalent. Land in Marsabit is categorized as Trust land which is held by the local authorities in trust for the people. As such, there is no individual land tenure. This predisposes the area to conflicts between nomadic communities as property rights are loosely defined. The County has no major water source and therefore the residents rely on water springs, underground water and seasonal rivers. These are communal resources which could easily trigger conflict in times of scarcity. Droughts also increase vulnerability and exacerbate conflict.

The Turkana in the North western tip of Kenya is bordered by equally hot and dry Counties. The County is prone to famine and cattle rustling due to constant migration by pastoralists from its different parts and from neighboring Counties in search of pastures for their livestock and occasionally has experienced cross border conflicts from indigenous groups from Uganda, South Sudan and Ethiopia. Climate variability has caused degradation of the environments leaving it worse off than before. Further, Lake Turkana is drying up and receding due to climate change not to mention creation of dams upstream by the Ethiopian government on River Omo.

Baringo County shares borders with quite a number of neighbours namely, West Pokot, Elgeyo Marakwet, Nakuru, Laikipia and Uasin Gishu Counties. Some of its neighbours have serious security concerns, in particular the border between Baringo and West Pokot; and Laikipia counties are porous and in the hands of cattle rustlers who are in possession of small arms. Communities from the three Counties habitually raid each other to steal livestock. The primary economic activity within the County is livestock keeping. Inevitably this leads to conflicts as communities have to fight for pasture in the dry seasons. These seasons also coincide with rites of passage which create demand for activities such as cattle rustling. The conflicts that arise in these situations are for pasture and water (CRECO, 2012).

On displacement and migrations, a report by (UNOCHA, 2014) shows that in Turkana 1730 people were displaced, in Mandera-125,107 people were displaced; in Wajir, 84,980 people were displaced between January and November 2014. Displacement Figures have sharply increased due to increase in number and frequency of droughts leading to resource based clashes. Mandera County has particularly suffered from struggle from political representation

and its proximity to both the Somali and Ethiopian borders. Although the causes of conflicts differ according to the report, a good number of the reported cases include struggles for control and use of dwindling resources-in particular water and land for pastures. Figures for 2013/14 show that almost 500 people in Mandera were killed and more than 55,000 people were displaced as a result of inter-communal violent conflicts. That means the number of people displaced by conflicts in the first half of 2014 was almost four times the number of people displaced in the entire previous year (2013).

Areas most affected by inter-communal conflicts in Kenya include semi-arid districts of Turkana, Isiolo, Samburu, Wajir, Moyale and Mandera in the north of the country. Apart from the traditional causes of conflicts in these areas which have mainly been cattle rustling and clan or tribal conflicts over political representation, recent conflicts are either caused or exacerbated by the effects of climate changes which include scarcity of water and pastures for pastoral communities who make the majority of the resident communities in these areas. A report by IDCM revealed 95 percent of the 220,000 displaced people in 2014 were from Kenya's north-east where pastoralism is the primary means of livelihood. Conflicts and displacement are as a result of pressure on scarce resources as the region hosts the largest pastoralist groups. Furthermore, the deteriorating security situation was resulting from threats from terrorist groups and proliferation of small arms and lastly, historical grievances and the effects of new power structure relating to marginalization and failed struggle for secession after Kenya gained independence (Caterina & Klos, 2015).

The Kenyan climatic land condition leaves the majority of ASALs' residents susceptible to weather disasters as the climate changes over time. In the last decade, frequency and severity of natural disasters in Kenya have affected larger numbers of people (NCPD, Kenya Population Situation Analysis, 2013). For example, before 1990s, drought events occurred at five to ten-years intervals and on average affected less than 50,000 people per year (UNISDR, 2012). This statistics dramatically changed over the 2000-2009 decade when drought events occurred every one to three years and affected an annual average of 1.5 to 4.5 million people (UNISDR, 2012) (Boko, Niang, & Nyong, 2007). The 2008/2009 drought alone affected 10 million people, and decimated over 20 percent of livestock population in the arid and semi-arid lands.

Furthermore, the international disaster database (CRED, 2002) 1993-2010, a total of 73 natural disaster events including droughts, epidemics, flood, landslides and a tsunami,

occurred in Kenya. These events affected accumulative total of 48.46 million people. Droughts had the highest impact (39.2 million people) epidemics (6.9 million people and floods (2.4 million people) (CRECO, 2012).

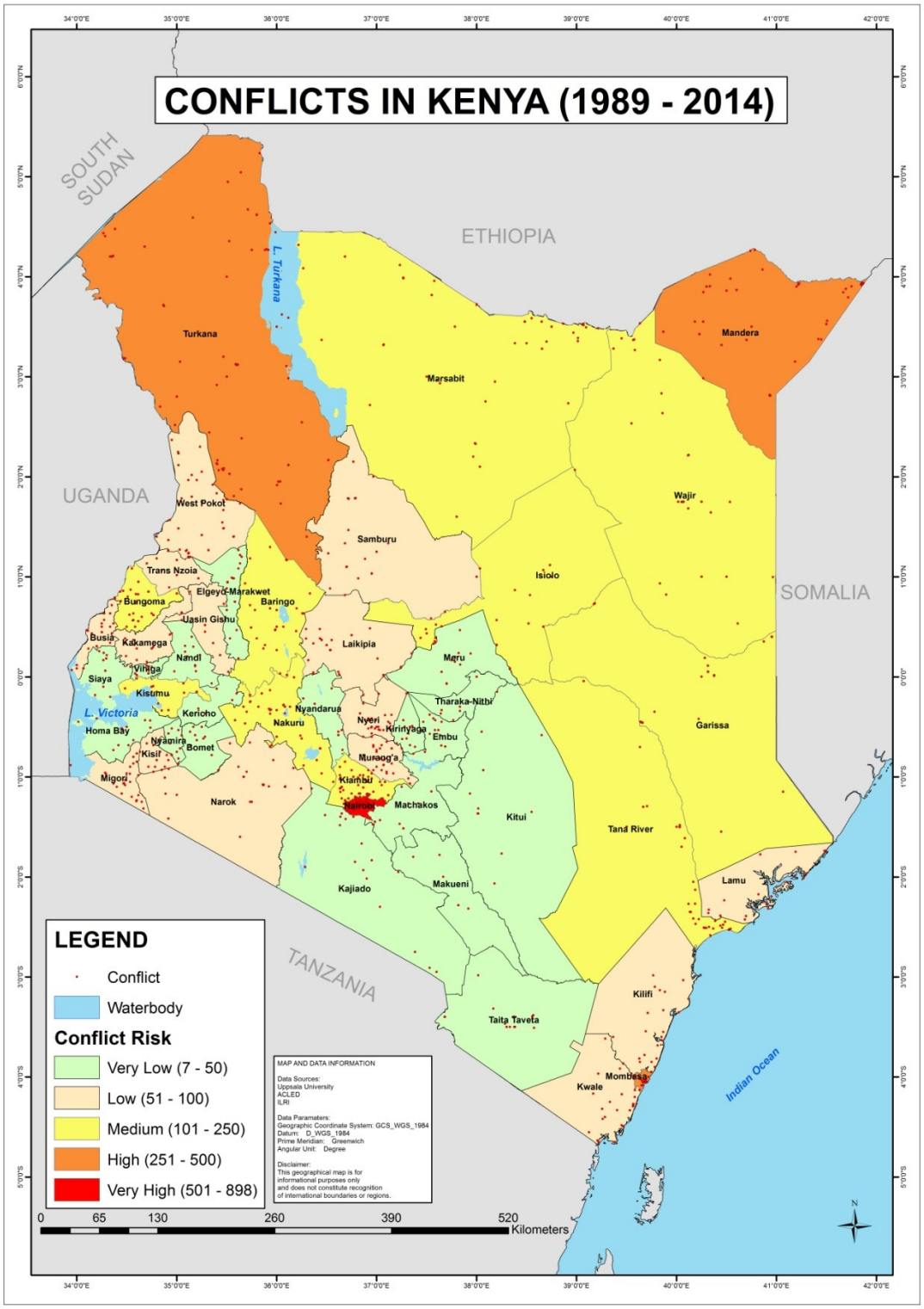

Figure 2: Conflicts in Kenya 1989-2014

Source: (Kaoga, 2016)

Note: Unpublished

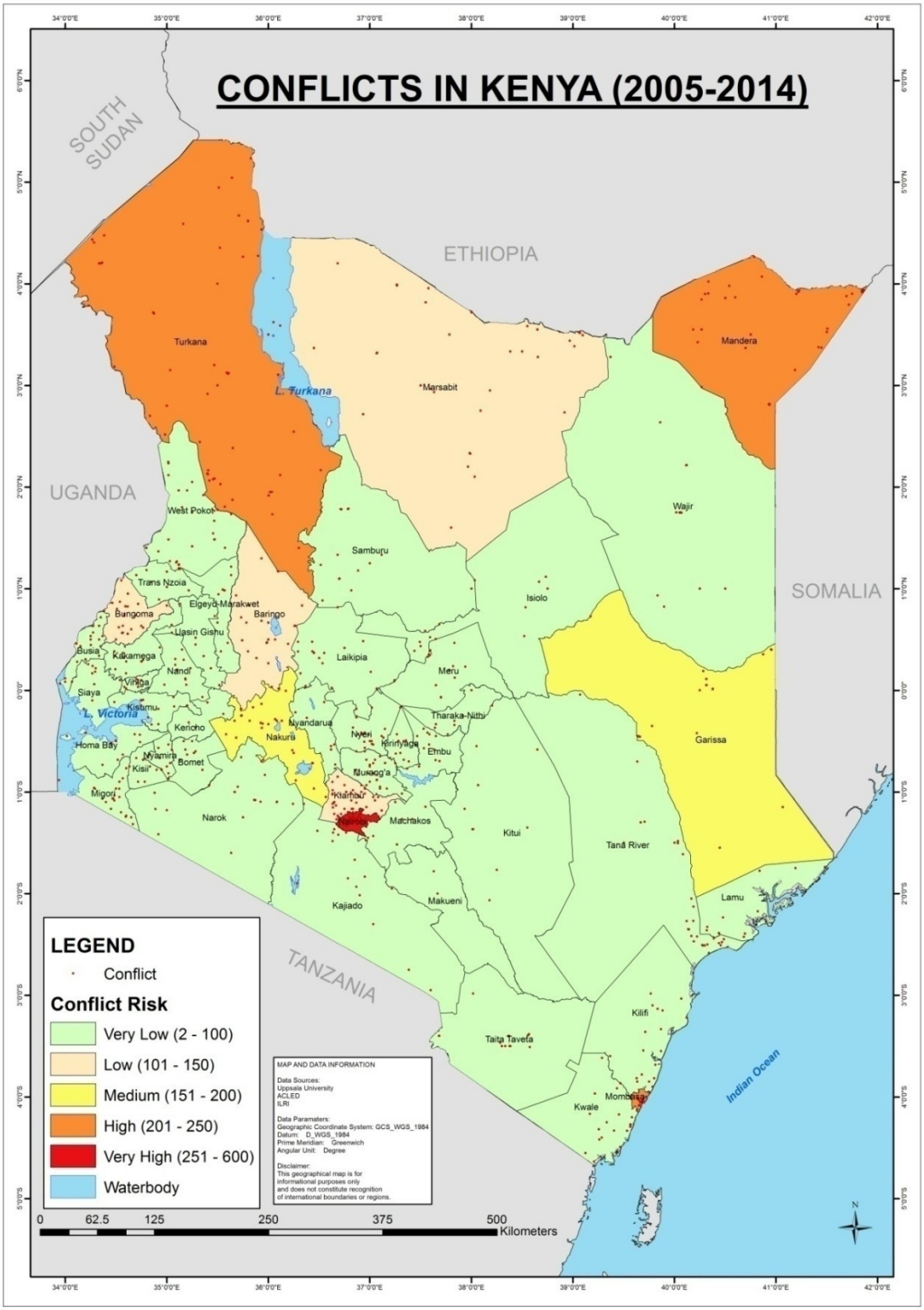

Figure 3: Conflicts in Kenya 2005-2014

Source: (Kaoga, 2016)

Note: Unpublished

Table 1: Droughts and flood disasters in Kenya 1975-2004

Year	Type of natural disaster	Area of coverage	The affected persons
2004	Drought	Widespread	2-3 Million
2004	Landslides	Nyeri, Othaya, Kihuri	5 deaths
2002	Landslides	Meru Central, Muranga, Nandi	2,000
2002	Floods	Nyanza, Busia, Tana river basin	150,000
1999/2000	Drought	Widespread	4.4 million
1997/1998	El Nino Flood	Widespread	1.5 million
1995/96	Drought	Widespread	1.41 million
1991/92	Drought	Arid and semi-Arid districts of NE, Rift Valley, Eastern and Coast	1.5 million
1985	Floods	Nyanza and Western	10,000
1983/84	Drought	Widespread	200,000
1982	Floods	Nyanza	4,000
1980	Drought	Widespread	40,000
1977	Drought	Widespread	20,000
1975	Drought	Widespread	16,000

Source: National Policy on Disaster Management (Revised Draft) p4, Nairobi, Kenya.

Table 1 above show some of the reported disasters in Kenya, their impacts and counties commonly affected in 1975-2004 period.

Table 2: Profiles of counties commonly affected by droughts in Kenya

County	Economic activities	No. of households	Area in Sq. Km.	Population density	Male	Female	Total
Baringo	Pastoral Agro-pastoral	110,649	1,970	282.0	279,081	276,480	555,561
Laikipia	Pastoral Agro-pastoral Marginal-agriculture	103,114	1,023	390.3	198,625	200,602	399,227
Turkana	Pastoral Agro-pastoral	23,191	1,520	562.8	445,069	410,330	855,399
Samburu	Pastoral	4.244	21,126.5	10.6	112,007	111,940	223,947
Narok	Pastoral	169,220	1,852	459.5	429,026	421,894	850,920
Kajiado	Pastoral	173,464	1,105	351.6	345,146	342,166	687,312
Marsabit	Agro-pastoral	56,941	653	445.9	151,112	140,054	291,166
Isiolo	Agronomic Pastoral	31,326	397	360.9	73,694	69,600	143,294
Garissa	Pastoral	98,590	861	723.7	334,939	288,121	623,060
Wajir	Pastoral Mining (limestone)	88,574	815	812.2	363,766	298,175	661,941
Mandera	Pastoral	125,497	1,038	988.2	559,943	465,813	1,025,756
Tana	Agronomic	47,414	626	383.5			

River	Pastoral				119,853	120,222	240,075
Kilifi	Mining (coral) Sand harvesting	199,764	2,343	473.6	535,526	574,209	1,109,735
Kwale	Mining (coral) Sand harvesting	122,047	1,265	513.8	315,997	333,934	649,931

Source: (KNBS, 2010)

Table 3: Profile of flood and drought aftermath in Kenya

Date	Regions	Inundation Levels	Impacts
2010	N & S RiftValley, Western Nyanza, Kwale, Taita Taveta Magharini	1,301.6 acres of farmland submerged in water	▪ 8,198 household displaced; 27 people died, 297 cholera cases reported, 4,543goats, 196cattle, 62 &donkeys and 193camels died; 2 schools and health facilities destroyed Kenyan -Sudan road cut off by flood waters ▪ Boreholes and latrines destroyed; 1991hectares of farmland washed away
2009	E, C & S. Turkana S. Pokot, Lower Tana, Kitale, Rift Valley - Sigor, Siaya, Migori, Kitui Mandera	1,000 acres flooded 1,800 acres/ submerged in water	▪ 7,792 households were displaced; 14 people drowned in the raging waters; 5 bridges and 20 pit latrines collapsed; 2 schools and 2 health facilities destroyed ▪ 6,734 shelters destroyed; 4,533 goats, 196 cattle, 60 donkeys and 193 camels died ▪ Kenya-Sudan road cut off ▪ 218,869 people displaced, 5,000 people marooned, 1 dead of cholera, 350 treated of diarrhea Karagoni bridge destroyed; 1 vehicle swept away
2008	Taita, Mandera, Budalangi, Migori, Nyando,Wajir, Siaya, Nyatike, Tharaka Nithi,		▪ Over 2000 people were displaced ▪ Schools were closed and over; 400pupils sent home; Churches, chiefs camp and farmland submerged ▪ Over 300,000 affected in other places other than Taita

	Tranzoia, Pokot Central		
2007	Lower Tana River; Western; Athi		▪ In Tana River District more than 125,000people affected of which 81,095 were displaced; 3people trapped in a roof of the house 1 trapped on top of a tree ▪ Transport along Nairobi-Namanga was paralysed
2006	Migori, Nyatike, Lower Tana River, Mwingi, Garissa, Moyale Isiolo	Over 2.5km of lower R. Tana course submerged; 300 homesteads submerged	▪ 3,000 people affected, 2,860 families displaced, 38people rescued from floods and 7 people died, 1,742 people are marooned and 1person affected by diarrhoea ▪ Areas 20km radius from town center was cut off in Tana River; 3 primary schools closed ▪ Destruction of water pumps at the irrigation schemes; 5 people spent two nights on trees; 50 camels, 50 goats, 14 cattle and 27 donkeys were washed away
2005	Taita		1 person drowned; Houses submerged; Plantation Destroyed
2004	Nyando		50 people died, 7,886 people displaced; 21 primary schools severely damaged; Destroyed most crops including maize and mille
2001	Rachuonyo		2000 people displaced; Property destroyed
2003	Nyanza, Busia, Tana River		170,000

2002	Nyanza, Busia, Tana River		150,000
1997/ 98	Widespread		1.5 million
1985	Nyanza, Western, Tana River		10,000
1982	Nyanza		4,000

Source: Compilation from Daily Nation Newspapers Reports, IFRC online reports and Inter agencies reports (1982-2010).

4.2 Case studies

This research, after careful analysis of conflicts in the country, settled to undertake cases in two counties i.e. Turkana and Samburu. The case studies analyzed the link between climate change, conflicts and migration in both Turkana and Samburu counties. Their selections were based on the mapping of conflicts exercise in the past 10 and 30 years from conflict databases i.e. ACLED, UCDP, SCAD and news articles where the two counties featured prominently in conflicts associated with natural resources.

4.2.1 Selection of Turkana and Samburu County case studies

4.2.1.1 County

The selection of Turkana was informed by the fact that it is the second largest pastoralist community after Maasai. The County borders three international community's with which they conflict i.e. South Sudan, Uganda, and Ethiopia. The County also share common tragedies of the harsh climatic conditions with the neighbours. Furthermore, their aggressiveness in defending and offending for their resources conservation and utilization against any intruders or aggressors as is the case with all other pastoralist communities is undoubted.

Turkana County dominated the Turkana people who are not only offensive but are also the widest travelling nomads. This predisposes them to conflicts with their neighbours who have similar livelihood. These include the Toposa from South Sudan, Merille from Ethiopia, and the Karamoja cluster communities from Uganda, Pokot and Samburu from Kenya. This has been due to the fact that among the nomads, their region experiences the harshest climatic

variations which force them out to search for pasture and water from whichever place leading to conflicts. The instability in the region has made Turkana County to be susceptible to proliferation of small and light weapons. This has led to violent conflicts causing displacement in the region.

Furthermore, the influx of refugees in the County from the neighbouring countries was also a factor considered owing to the fact that the refugee camp environ is a settlement attraction owing to the availability of water and a possibility of small arms proliferation by the refugees. The refugees may obviously lack direct linkage to climate change but a cause for conflict in the region. The other reinforcing factor for choosing Turkana County was the oil discovery. The exploration area has led to seclusion of pasture land curtailing the livelihoods of the pastoral communities. Turkana County case became a delicate situation in view of the nexus of the climate change, dwindling resources, experience of both intra and inter communal conflicts exacerbating migrations.

4.2.1.2 Samburu County

The selection of the Country was because it is better endowed with pasture and water in comparison to Baringo and Turkana Counties. This prompts Turkana and Pokot communities to migrate to Samburu during dry spells. Samburu community also has long standing conflicts over pasture and water with Borana from Isiolo County and Maasai from Laikipia County. Influx of other pastoral communities leads to competition over natural resources which are dependent on climatic conditions. Instability in the region has caused proliferation of small and light weapons which has led to conflict turning violent and leading to displacement.

4.3 Case study 1: Turkana County

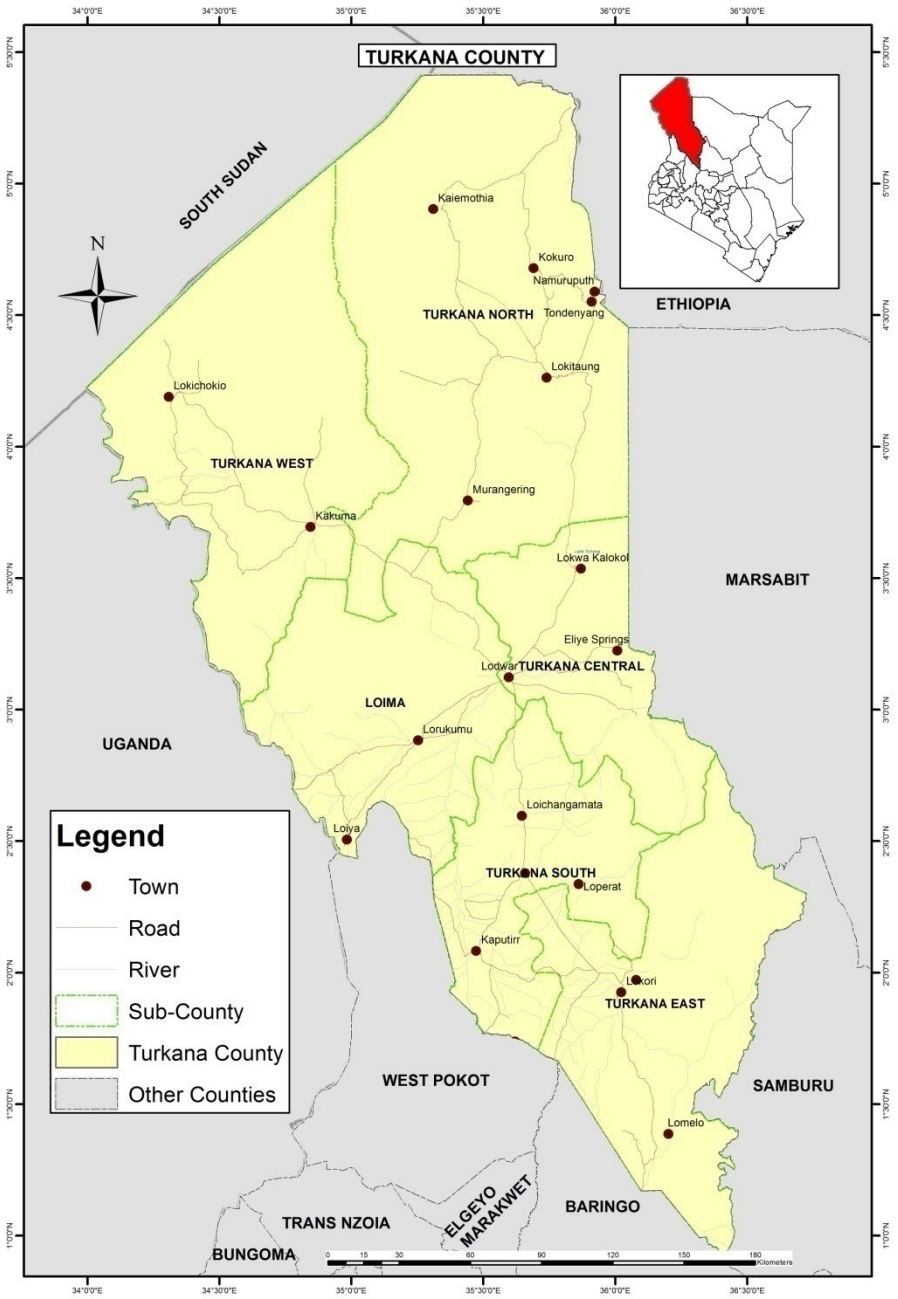

Figure 4: Map of Turkana County

Source: (Kaoga, 2016)

Note: Unpublished

4.3.1 Background

Turkana County is located in the North western part of Kenya and borders three countries i.e. Ethiopia and South Sudan in the North and Uganda to the West. Turkana people are the dominant in the County although several other tribes such as Elmolo have settled there over

the years. The County is situated in northern Kenya, about 700 km from Nairobi. Turkana County is the second largest County in Kenya covering 68,680 square Km with a population of 855,399 people (male - 52.03% and female - 47.97%) (KNBS, 2010; Kenya Information Guide, 2016). The Turkana are nomadic pastoralists who mainly keep cattle, donkeys, camels and goats. The animals are their main source of food and wealth. They are the second largest pastoral community in Kenya after the Maasai people. Turkana County shares its borders with four counties; Marsabit to the East, Samburu to the South-East, Baringo and West Pokot to the South-West. The County is divided into six sub Counties i.e. Turkana South, Turkana East, Turkana North, Turkana West, Turkana Central and Loima.

The County is arid and semi-arid and characterized by hot climate with mean temperature of 30.5 ^{0}C. The rainfall pattern and distribution is erratic and unreliable. Turkana receives two rainfall seasons with the long rains occurring between April and July while short rains fall between October and November with a range of 52 mm to 480 mm and an annual mean of 200 mm. The County is prone to frequent rain failure leading to massive loss of livestock and pasture. (Ministry of Interior and Coordination of National Government, 2014)

Recurrent drought episodes have become more frequent than earlier and changes in weather patterns are more pronounced. There are declining trends in the water resources, flora and fauna; some plant species have become either extinct or endangered. Drought episodes have become more frequent leading declining water resources impacting on flora and fauna. Over the past 30 years climate has become more variable with a shift from known seasonal patterns which were January – mid-March (dry spell) and rainy seasons (mid-March – April and October – December) (Ekal & Ameripus, 2016). In the 1960's there were large herds of livestock and wildlife in abundance. The large herds led to overgrazing on vegetative resource thereby depleting them and causing migrations. Currently, the County is experiencing severe seasonal changes resulting into drying of rivers e.g. Rivers Kerio and Tukwel which experiences dry beds and interrupted flows unlike in the earlier cases. This is resulting into reduced downstream flow that recharges Lake Turkana. (Ajele, 2016)

4.3.2 Natural resource trends

The land use land cover analysis indicates that Turkana County has undergone significant depletion of forests and vegetation cover. Temporal analysis of Turkana County shows that bare area has increased by 1474.76% and forest cover has decreased by 77.58% since 1979 to 2015 (see Table 4). Moreover, the vegetation cover has also changed significantly as shown in the comparison between the land cover maps (1979 and 2015) (Fig. 5 and 6) respectively. Shrub land is moving into forest land while grass land has slowly shifted into shrub land indicative of loss of eco-system services. During the field survey, it was observed that land degradation as a result of soil erosion is on the increase in the area due to flash floods, overstocking and clearance of forest land. Furthermore, there are long standing environmental problems such as the invasive species *Prosopis juliflora* (mathenge) which is slowly suffocating the pasture land.

Table 4: Land Use Land Cover change in Turkana County

LAND COVER	1979 Area (Ha)	2015 Area (Ha)	% Change
Bare Area	13,035.90	205,284.30	1474.76
Built Up	162.00	3,025.90	1767.84
Cropland	557.20	3,274.40	487.65
Forestland	112,576.20	25,237.00	-77.58
Grassland	2,234,933.50	2,634,989.00	17.90
Riverine	60,072.30	100,345.50	67.04
Shrubland	4,288,285.80	3,532,906.00	-17.61
Water body	282,579.50	279,246.50	-1.18
Wetland	43,201.80	251,095.50	481.22
	7,035,404.20	7,035,404.20	0

Source: (Kaoga, 2016)

Note: Unpublished

The change of eco-systems occasioned by decreasing forestland, shrub land and significant loss of vegetation cover has contributed to the change in climate. This has resulted in the increased rate of migrations and conflicts. Such movements are likely to increase in the future with the anticipated increase in extreme weather events like droughts. There has been growing concern over armed confrontations in the areas with resources due to competition. The scenario is heightened if the environmental migrants are from different ethnic groups. This confirms statements captured during the Focus Group Discussions and interviews with

the Key Informants noting that most of the conflicts in Turkana County are as a result of struggles to control dwindling resources (water and pasture).

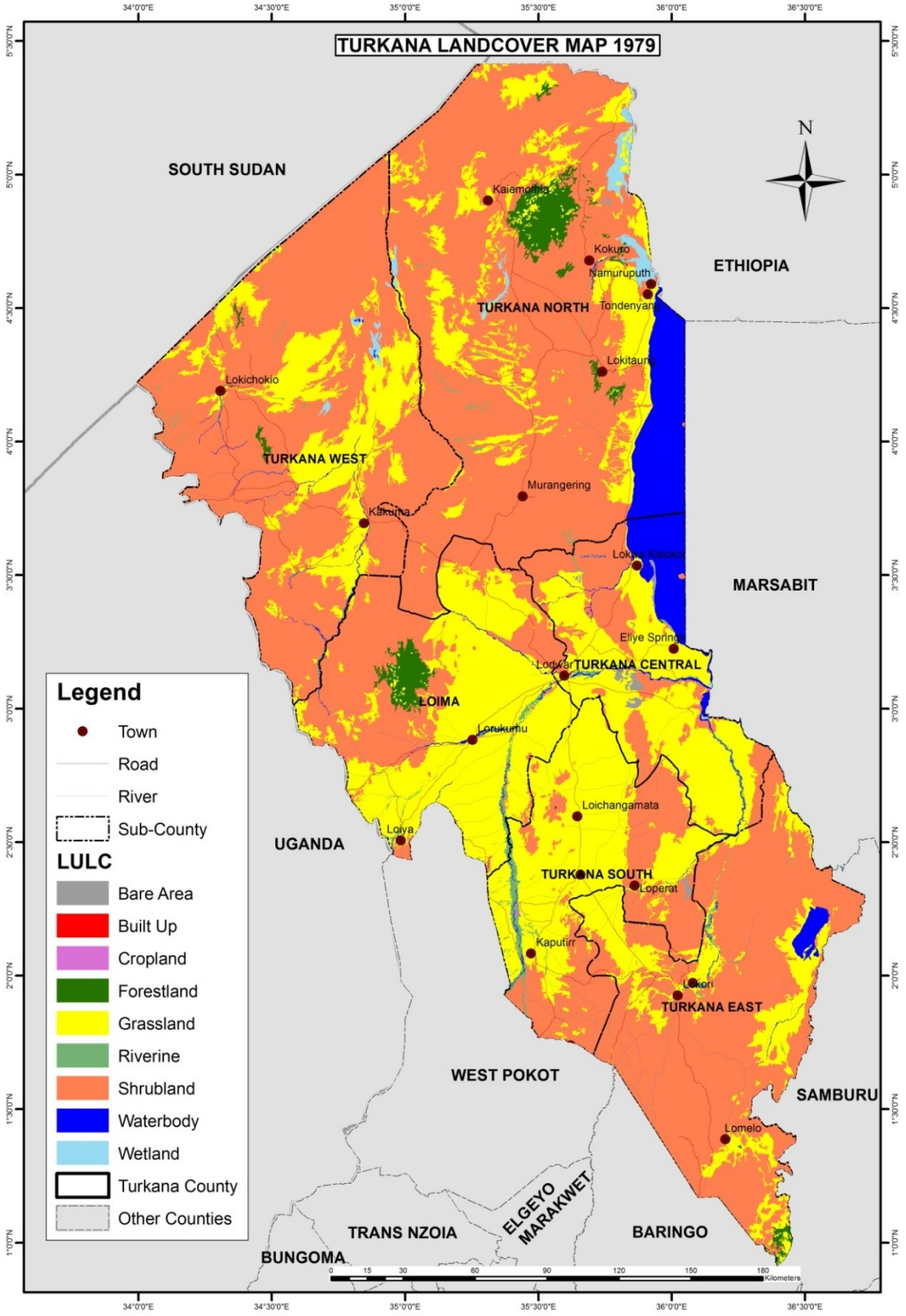

Figure 5: Turkana land cover in 1979

Source: (Kaoga, 2016)

Note: Unpublished

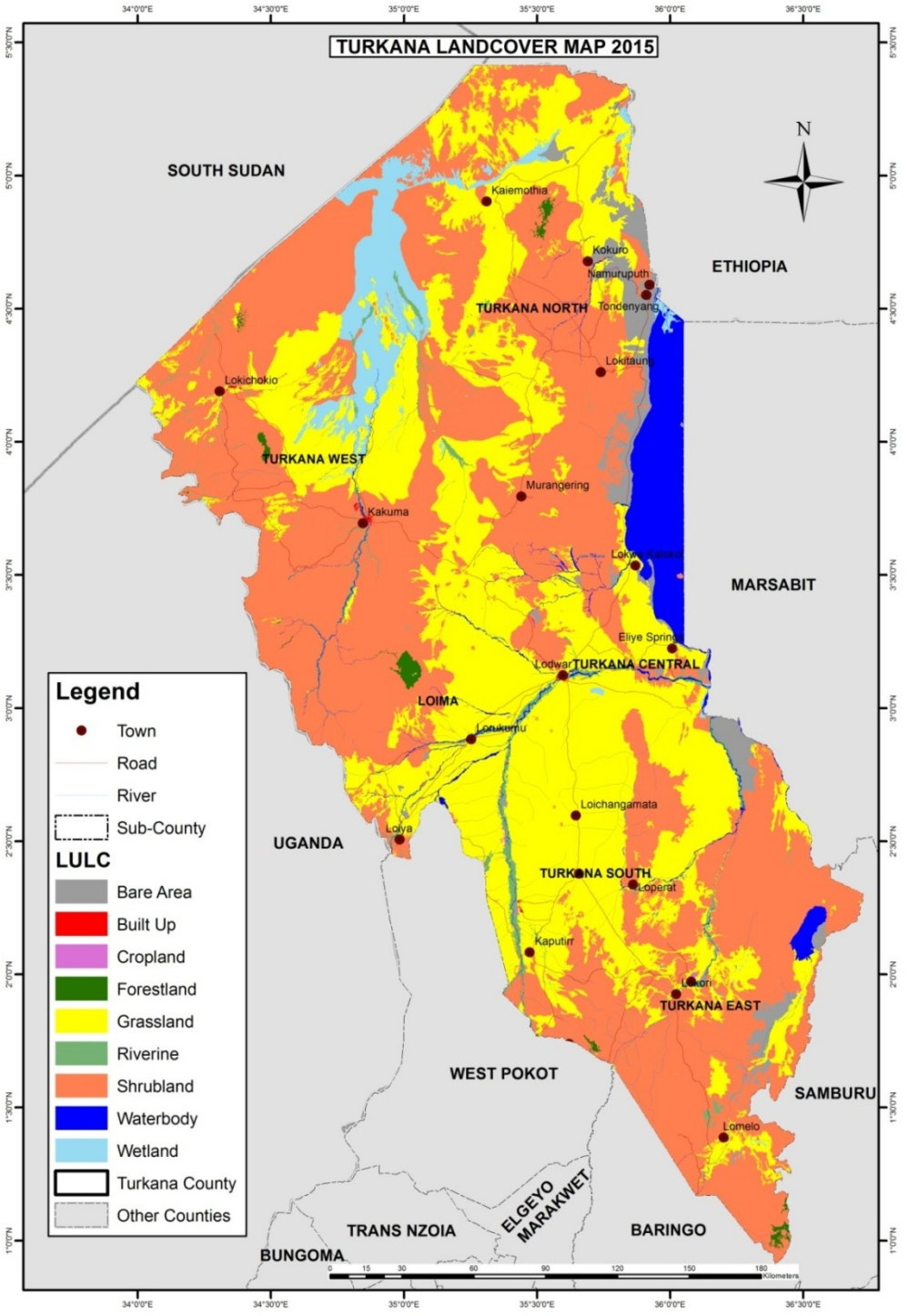

Figure 6: Turkana landcover in 2015

Source: (Kaoga, 2016)

Note: Unpublished

4.3.3 Precipitation Trends in Turkana County

The precipitation trends were generated from Geoclim data set and the analysis is shown on figure 7 below. From the analysis 1981 – 2014 the County has received an annual average rainfall between 300mm to 400mm, the deeps and the crests for yearly rainfall range from 180mm to 580mm.

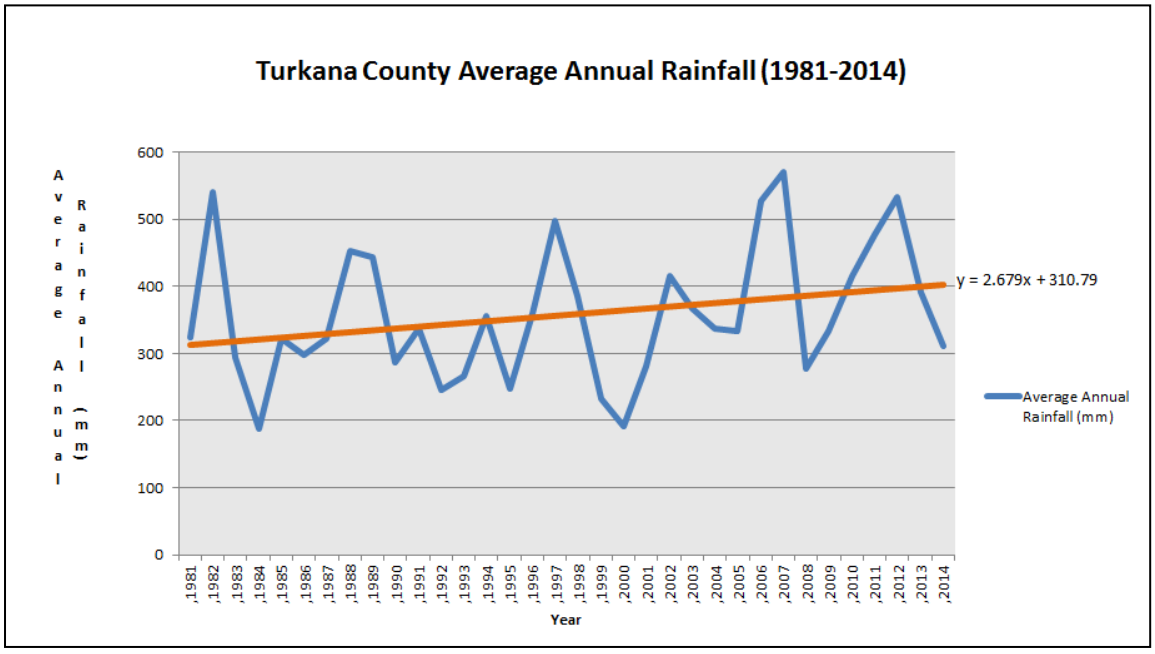

Figure 7: Turkana County Average Annual Rainfall (1981-2014)

Source: (Kaoga, 2016)

Note: Unpublished

Figure 7 shows that Turkana County has experienced 3 major episodes of very low precipitation between 1981 and 2014. These episodes are 1983 – 1985, 1990 – 1994 and 1998 – 2000.

There has been a general increase in the rainfall amounts during the period. (1981 to 2014). However, the study noted that rains have become more sporadic, intense and spatially biased towards the elevated areas of the County. The trend analysis at Sub County level shows that Turkana North and Turkana West received higher amounts of rainfall compared to other Sub Counties with Turkana Central receiving the lowest.

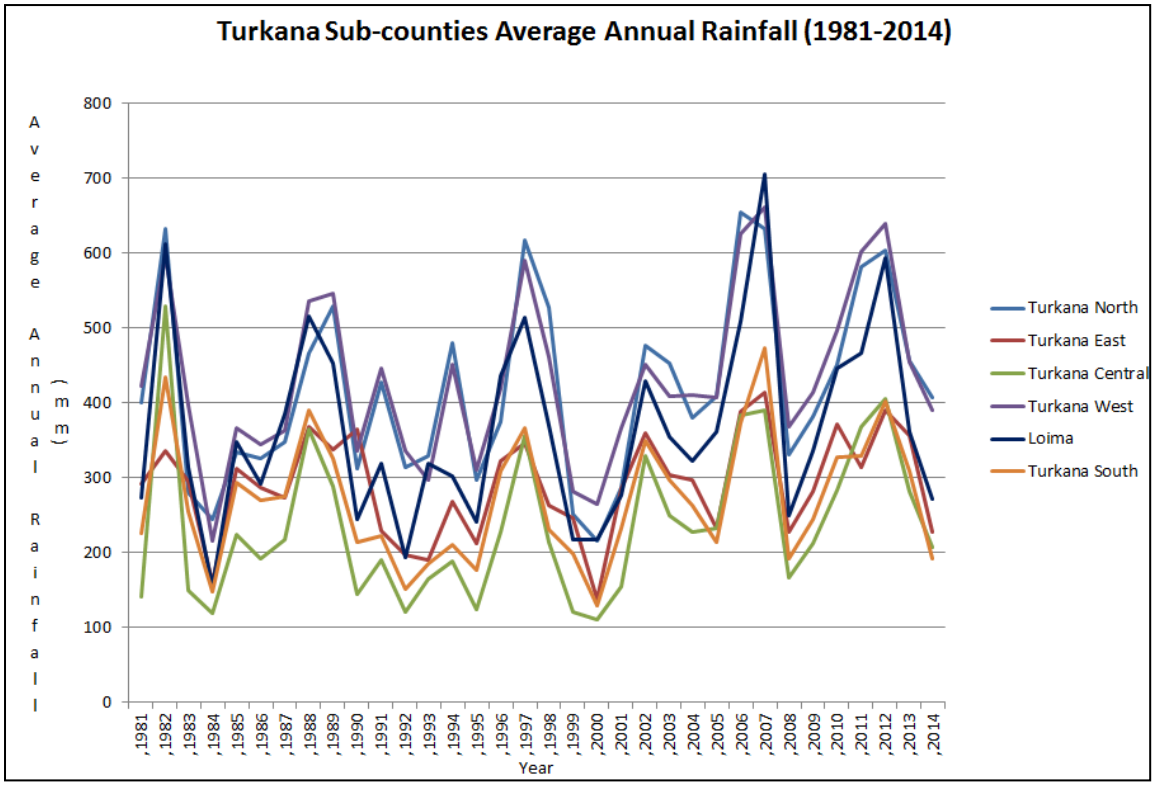

Figure 8: Turkana Sub-Counties Average Annual Rainfall (1981-2014)

Source: (Kaoga, 2016)

Note: Unpublished

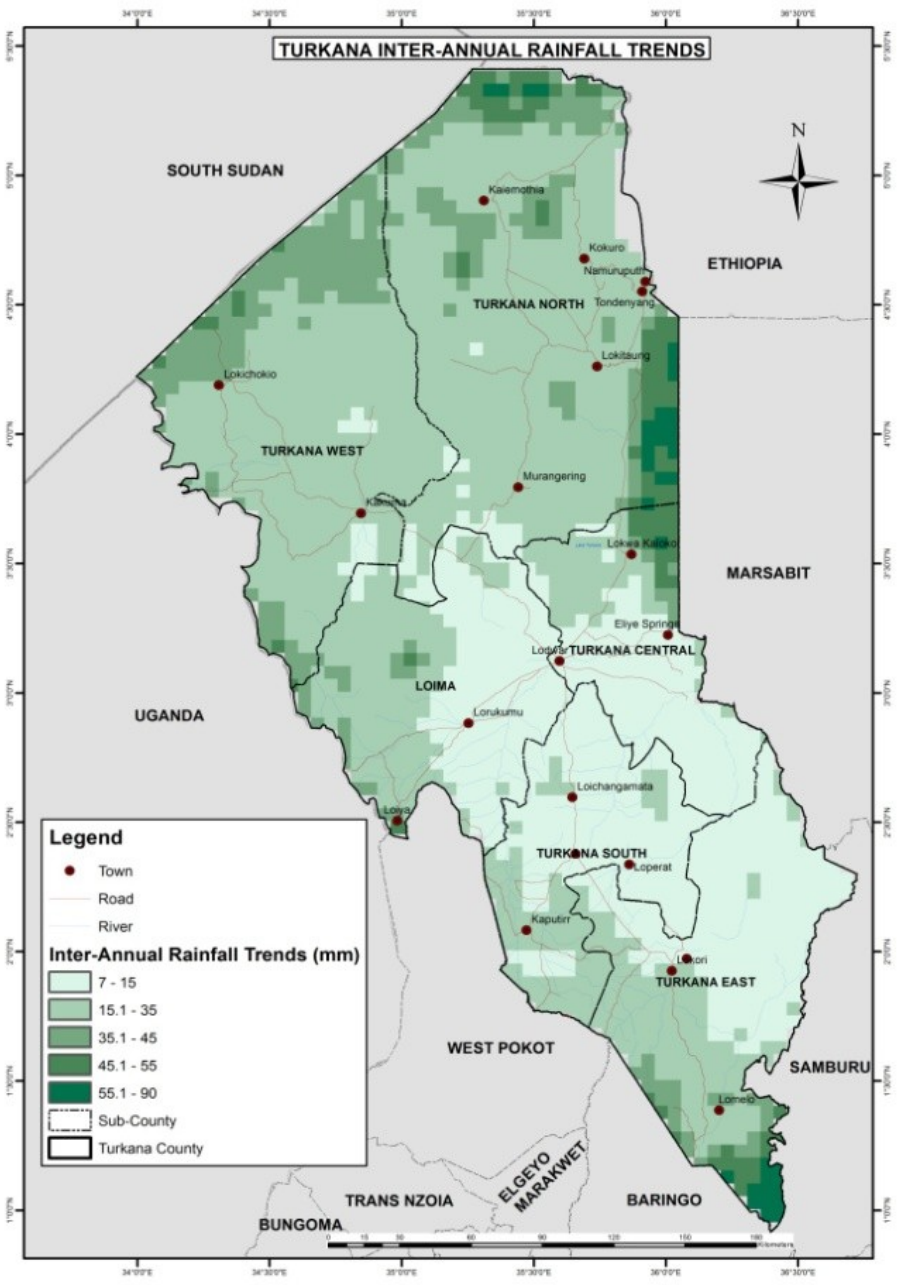

Figure 9: Turkana Inter-Annual Rainfall Trends

Source: (Kaoga, 2016)

Note: Unpublished

The inter-annual rainfall trends analysis shows that more precipitation is received in elevated areas indicating strong influence of altitude as the highlands receive slightly more rainfall compared to the rest of the regions. Analysis of the inter-annual coefficient of variation of

rainfall (see figure 10) shows the central part of Turkana County has the highest coefficient of variation. The North and South of Turkana have the lowest coefficient of variation.[2]

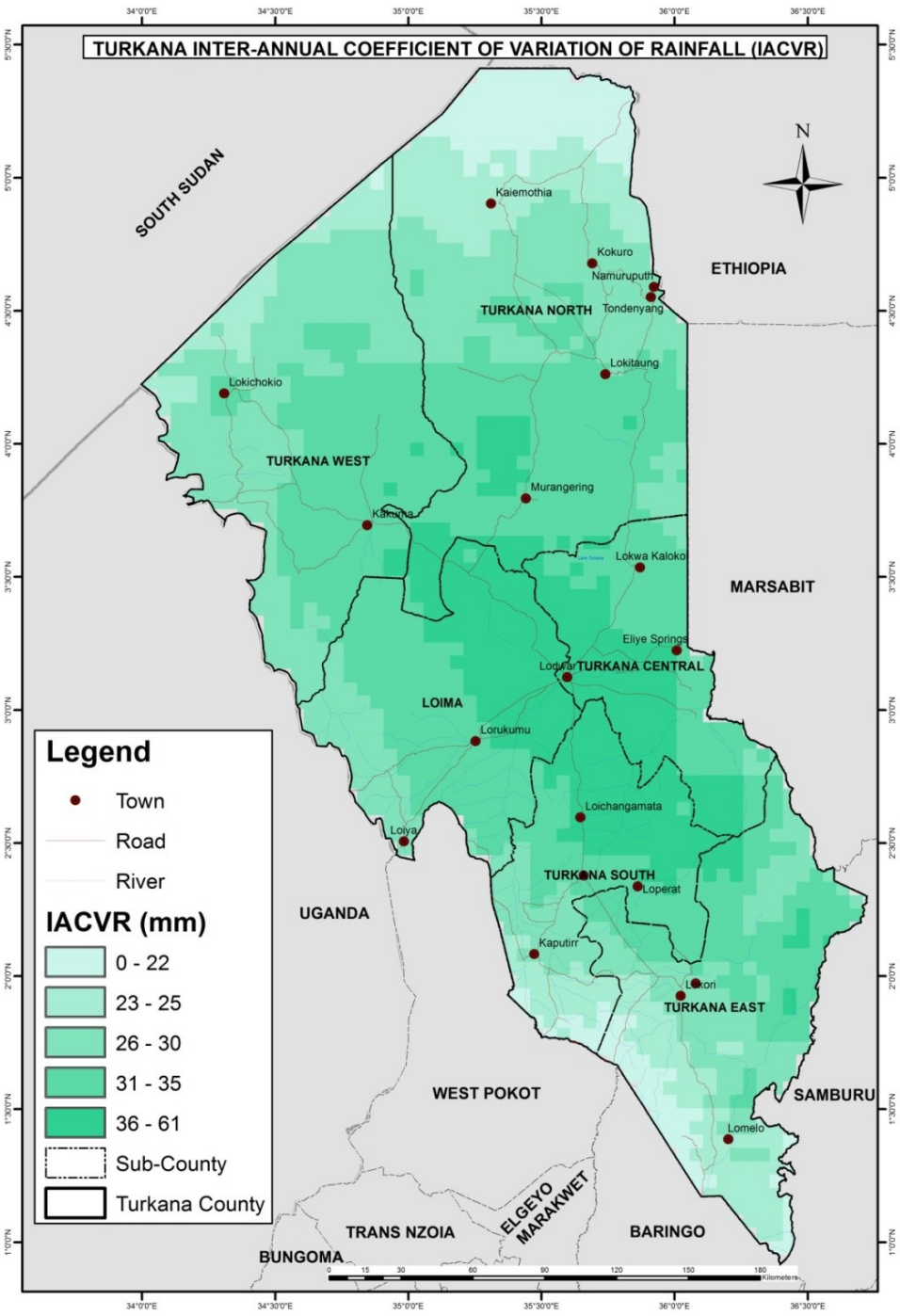

Figure 10: Turkana Inter-Annual Coefficient of Variation of Rainfall

Source: (Kaoga, 2016)

Note: Unpublished

Higher coefficient of variation indicates higher variability hence difficulty in predicting seasonal precipitation patterns. Therefore, planning become a challenge.

4.3.4 Conflicts in Turkana

The conflicts in Turkana have morphed from cultural activities into incidences of violent conflicts due to proliferation of arms over time. The drivers of conflict include; climate change, ethnocentrism, cultural practices, politics, land, oil and gas and boundaries (Masinde, Muhamud, & Pkalya, 2004). Members of the Turkana community recently identified climate change as the biggest threat to their livelihoods since it is one of the contributing factors to shrinking natural resource base (Webootsa, 2016).

Conflicts in Turkana have been of varying trends and dimensions, firstly, they occur when there is plenty of pastures as pastoralists yearn for more herds to restock herds. According to (Masinde, Muhamud, & Pkalya, 2004) there are several reasons for restocking at this time, these include raiding to add livestock wealth, raiding to acquire wealth especially for the poor so they steal because they do not have anything, while others raid to restore stock lost during drought or similar raids. Secondly, when there is scarcity of water and pastures and lastly, when the Morans want to marry they raid their neighbors' cattle to facilitate dowry payments-often highly priced. Besides, retaliatory missions, political agitations, access to and ownership of small arms and sheer expansionism quests all contribute to conflicts. Lately, conflicts have been attributed to climate change, exhibited in decreased pasture and water resources as the communities migrate to often times "hostile destinations" (Lambert, 2016; Ajele, 2016; Taigong, 2016; Ekal & Ameripus, 2016).

Geographically, most of Turkana is lowland. This plays a role in conflict dynamics since pastoralist migration is rather uniform to the highlands during dry spells in search of pasture. These highlands are located near borders with international communities which compete for the same resources. To the North, there is Solia Hills at the border with S. Sudan, the Hills near Todonyang' rise up to 4,373 feet, the highlands North of Namoruputh rise to 6,378 feet, on the Ugandan side, the highlands rise to about 5,400 feet in Matheniko game reserve and about 6,000 feet in Kalapata. These areas have thus become conflicts zones with the international communities such as the Toposa people from South Sudan, the Merille people from Ethiopia and the Karamajong from Uganda.

4.3.5 Climate change

Drought is a major challenge associated with climate variability in Turkana County. Pastoralists' regular exposure to it means that coping, adaptation and innovation has long been part of their lifestyle. Drought and weather patterns have also changed (Ericksen, Leeuw, Thorton, Said, Herrero, & Notenbaert, 2012).

Pasture and water is being sought from outside of the traditional grazing areas and migration patterns as a result of high frequency of droughts. This has led to increase in conflicts between the communities over access to water and pasture. This is clearly evident along Suguta valley bordering Samburu County and Turkana County. There is insecurity along this valley, where the Samburu, Turkana and the Pokot migrate for pasture.

The Lower Omo region is home to several communal groups such as the Mursi, Nyangatom, Dasanach (Merille) from Ethiopia and Turkana. These communities have adopted agro-pastoralism in response to harsh climate and erratic weather patterns and they have a history characterized with incessant fighting over grazing resources. The same scenario is replicated in the Western border with Uganda where the Turkana people, Jie, Doso, Ngitepes, Bokora, Ngiteuso and the Toposa community at the South Sudan border.

4.3.6 Political Processes

Divisive politics in Turkana and bordering counties have also contributed to conflicts in this region. The lack of clear boundary and land ownership policy in Pastoralist counties has been used by politicians to gain political mileage by instigating communities against each other. For instance in Turkwel, there have been conflicts with a political dimension (Mutsotso, 2015). During this period, politics that disenfranchise the unwanted community takes centre stage. Therefore, during electioneering period, the pastoralists are forced to move to areas that are safer to avoid conflict in neighbouring counties.

4.3.7 Cultural practices

Cultural practices such as payment of dowry using cattle has sustained the raids amongst the communities in Turkana and neighbouring counties. In some Turkana clans, if a warrior kills during cattle raid, he is given a rousing welcome and showered with adoration through traditional dances. Their bodies are tattooed as a mark of a great warrior and given a new name ending with the suffix *'moe'*.

4.3.8 Proliferation of fire arms

The proliferation of illicit arms has made traditional raiding of livestock more severe and frequent. The attacks escalate during droughts, initially it was necessitated by the need to restock a decimated herd after periods of droughts but currently, the practice has morphed into a commercial activity through well-coordinated cartels. According to FGDs, each County has cartels but they work together as cattle can be raided as far as Oropoi and pass through Turkana into Samburu for onward transportation to Nairobi. This has led to large-scale violent cattle raiding between neighbouring pastoral communities. The raids have forced the Turkana pastoralist to arm themselves to safeguard their herds (Lambert, 2016). According to FGDs, threats posed by the violent cattle raids have led some pastoralist to abandon their lifestyle and settle in towns as is the case in Nadapal where the frequent violent raids from the Toposa led to a families settling in Lokichoggio and Kakuma.

4.3.9 Marginalisation

Turkana is amongst the poorest counties in Kenya and has lugged behind in infrastructural development. The road from Kitale-Lodwar-Lokichoggio is in poor state and the County lack basic amenities such as hospitals and schools. This has led to low literacy levels and the only way to cope for many in this environment is through traditional livelihoods (pastoralism) that depends on climatic conditions. The inaccessibility has caused a major hindrance to prompt response by government security forces whenever there is need. This has created room for banditry, especially on the main highway to Lodwar, resulting to a need for armed escort.

One common attribute shared by the Pokot and Turkana is that during the colonial period their regions were marginalized due to their hostility to government and desire to remain independent. Consequently they remained marginalized until 2003 when Constituency Development Fund was introduced and further in 2010 with the introduction of County governments through devolution.

4.3.10 Land Resource

Most of the land in Turkana County is held under communal trust, however with increase in sedentary lifestyle, land has been allocated to individuals for settlement (Leseketeti, 2016). The introduction of land demarcation and title deeds has created another source of conflict between pastoralist and land owners.

4.3.11 Areas of conflict

Turkana has suffered the brunt of these conflicts because it experiences drier spells in comparison to the neighbouring counties. This explains why they migrate more which expose them in conflicts. The conflicts happen in areas that are more endowed with natural resources i.e. the highland at the border with Pokot, Ethiopia-Kenya border near River Omo delta, Uganda-Kenya border (Karamoja region) and S. Sudan-Kenya border. These highlands serve as points of conjuncture for the pastoralists during dry seasons due to presence of pasture. Pastoralists move from lowland to mid lands and eventually highlands as the rainfall diminishes. The hotspots identified lie in areas that receive higher rainfall. These have high inter-annual rainfall trends (Figure 9). The conflicts hot spots are outlined in Table 4 below.

Table 5: Conflict hot spots in Turkana County

Area	Actors	Country	Frequency
Todonyang'	Merille	Ethiopia	Very frequent
Kibish	Merille,Dongiro	Ethiopia	Very frequent
Nadapal	Toposa	South Sudan	Very frequent
Oropoi	Pokot	Kenya	Very frequent
Orum/Lotere/Lokiriama	Karamojong cluster	Uganda	Frequent
Lorengkipi and Loyaa	Pokot	Kenya	Very frequent
Kainuk	Pokot	Kenya	Very frequent
Kapedo	Pokot	Kenya	Very frequent
Lomelo	Samburu	Kenya	Not frequent
Lokichoggio	Nyangatom	S.Sudan	Very Frequent

The findings are in agreement with (Masinde, Muhamud, & Pkalya, 2004) study that found the parties in conflicts (communities) include Toposa from Sudan and Pokot from Kenya and Uganda. Other includes Dodoth from Uganda, Didinga from Sudan, Merille from Ethiopia, Matheniko from Uganda and Tepeth from Uganda, Dongiro from Ethiopia and Samburu from Kenya.

Table 6: Conflict Profile of Turkana County

Year of conflict	Name and cause of conflict	Conflict parties	Place of conflict	Migration
1962-1973	Loima	Karamojong vs Turkana	Loima	Migration to Uganda-the migrants are still in Uganda
1981	Nakuloro	Turkana Vs Pokot	Todonyang' Massacre. Raid leaders from both parties were killed	After this fight peace ensured following the killings of key leaders
1983	Lokwamuchela	Pokot vs Turkana	Lochakula, Juluk, Suguta and Katilu, Kainuk, Kapedo, Napeitom, Lokori, Nakwamoru, Lorokon, Lokori, Nadome, Lomelo, Kamuge, Kakong'u, Kotaruk,	Lokichar, Katilu, Juluk, Kaputir
1993	Kokuro conflict	Dongiro Vs Turkana	Chief (Emunyen) and his son were killed	

Source: FGDs, 2016

Turkana County has five major zones of conflicts. The North and the South sub-counties are the worst affected. The conflict corridors include: Kibish and Todonyang' in Turkana North, Oropoi and Lokichoggio in Turkana West, Lomirai and Kotaruk in Loima, Lochakula and Kapedo in Tukana East and Kainuk and Norumoru in Turkana South.

A survey of rainfall variability and raids according to (Savatia, 2011), in figure 11 shows that annual rainfall in Lodwar has a decreasing trend while the annual number of raids has an increasing trend. Lagged correlation between annual raids and annual rainfall indicates that there exists a significant positive correlation between annual rainfall of one year and the annual raids of the subsequent year. The annual raids for 1992 were the highest on record because of politically instigated clashes during that year. This finding is concurring with this study in the sense that declining rainfall fuels conflict in the area.

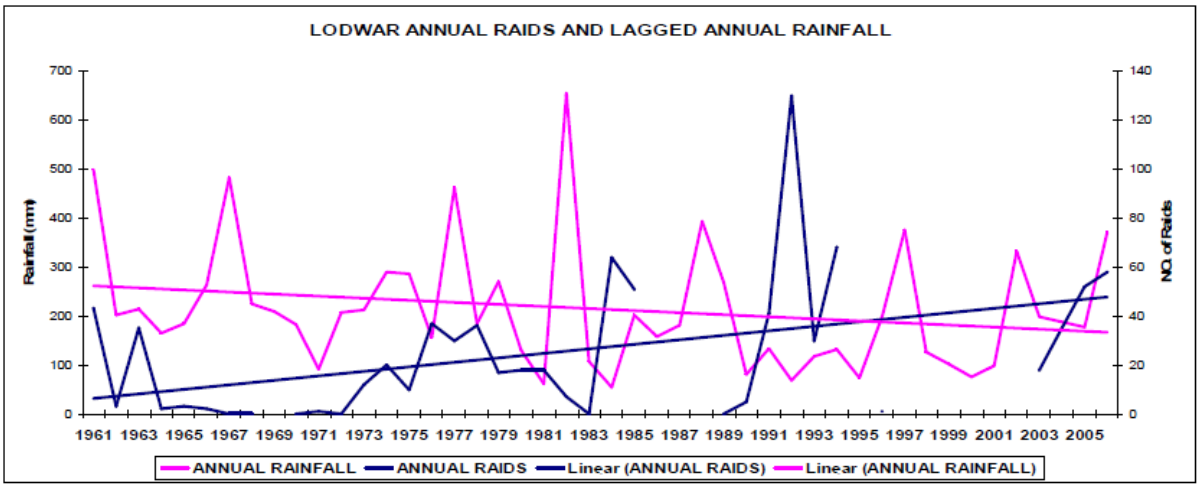

Figure 11: Annual Raids and Lagged Annual Rainfall over Lodwar

Source: (Savatia, 2011)

4.3.12 Root causes of conflicts

Turkana people have got varying causes to conflicts they engage in. These range from border issues as is the case with the Pokot in Kainuk area and the Elemi Triangle. The latter has been an area of traditional disputes between the Merrille, Toposa, Karamajong and Turkana. Besides border disputes, pasture, water, proliferation of arms and traditional practices are causes of conflicts in this County. The increasing livestock population in the County is also a predisposing factor to conflicts. It is noted that the highest livestock populations in Kenya are held by the Turkana and Pokot pastoralists leading to declining natural resource base (GoK, 2010). The increasing human and livestock population has also contributed to conflict in Turkana County. According to figure 12 the population of the animals has been increasing over the years with the greatest increment in goats and sheep which are leading environmental degradation through heavy browsing and grazing. This further leads to desertification which again inhibits sustainable pastoralism.

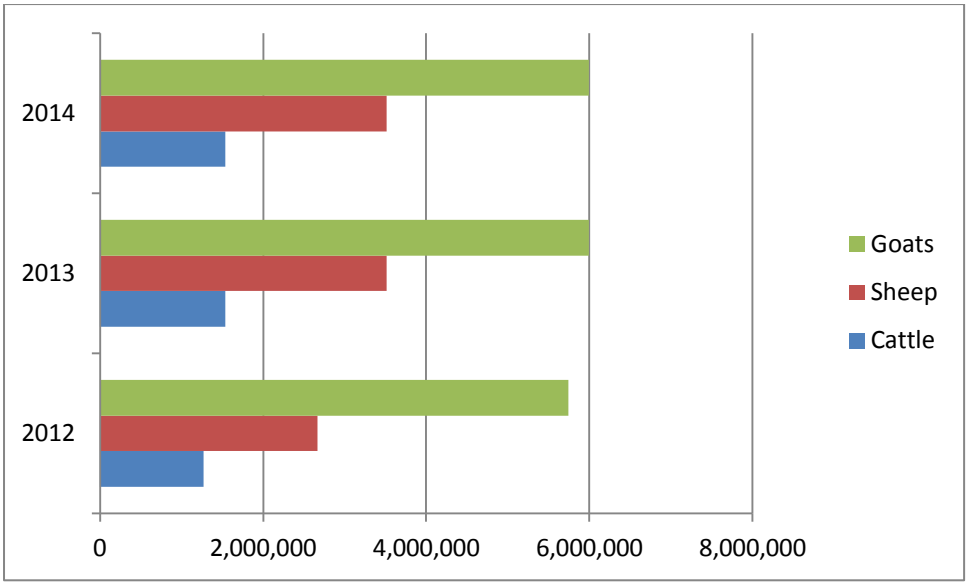

Figure 12: Livestock population trend in Turkana

Source: (Ministry of Agriculture, 2014)

4.3.13 Conflicts arising from effects of climate change

North-Western Kenya is an ASAL predominantly inhabited by the Pokot and Turkana who mainly engage in nomadic pastoralism. The Eastern part receives an average annual rainfall of about 200mm while the Western highlands receive over 500mm. The rainfall has been erratic and highly variable over the past 30 years. Annual mean temperatures have increased by 2-3^{0}C between 1967 and 2012 (Human Rights Watch, 2015).

Natural resource based conflicts is a common feature because of land use change, population growth and climate change. The conflicts usually occur around key natural resources as demand for dwindling water and pasture heightens. These demands tend to be seasonal in nature and increase during the dry season (Oguge, 2006). It is expected that these conflicts will increase in the rangelands as resources dwindle.

Table 7 shows a summary of conflicts existing prior to climate change but are being reinforced by climate change.

Table 7: Conflicts existing prior but are reinforced by climate change

Year (s)	Hotspot	Actors	Cause of conflict
1950-to date	Kibish	Merille/Turkana	Ethnic differences, scarcity of resources, anthropogenic causes-population increase, availability of guns

1962-1973	Loima	Pokot & Turkana	Territorial border, resources scarcity and cattle raids.
1981	Loima	Pokot & Turkana	Territorial border, resources scarcity and cattle raids.
1980-1983	Lokichar	Pokot & Turkana	Competition over grazing field, water and pasture.

Source: FGDs, 2016

Figure 13 present the conflict maps drawn by the Focus Group Discussion participants and the emerging migratory routes.

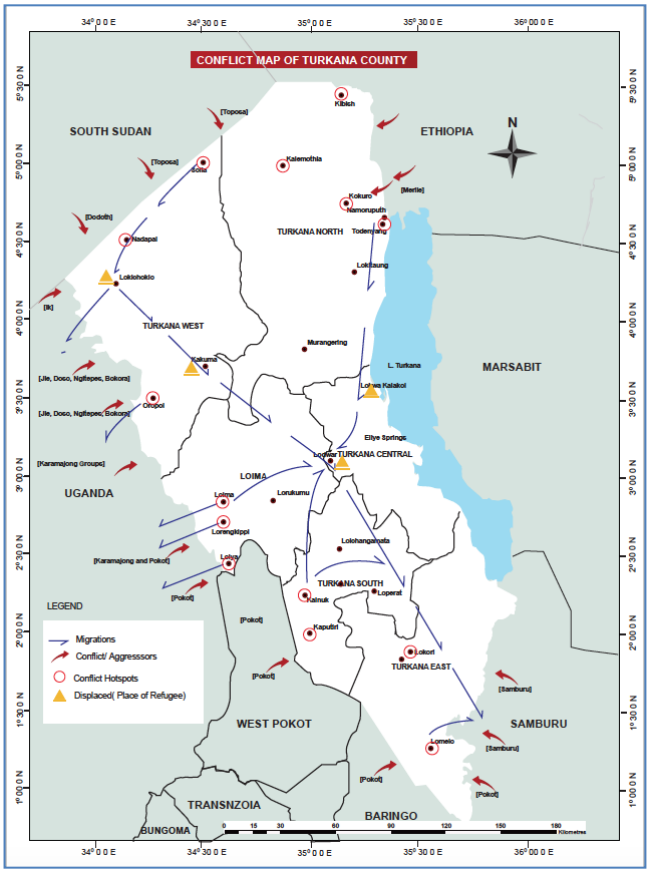

Figure 13: Conflict map and emerging migratory routes 2016
Source: (Kaoga, 2016)
Note: Unpublished

Similarly, Table 8 gives the conflicts that have been identified by the participants as multifaceted.

Table 8: Conflicts which are multifaceted but climate change is one of the driving forces

Year	Area	Actors	Cause of conflict
1995 – 203	Kainuk	Pokot & Turkana	Boundary conflict over ownership of Lorogon village, cattle rustling and environmental change.
2010 – 2011	Kaputir	Pokot & Turkana	Fighting over River Turkwel water resource which is diminishing, grazing field and cattle raiding
2011	Lokichoggio	Toposa & Turkana	Cattle raiding,

4.3.14 Conflicts turning violent and causing migration

All conflicts somehow turn violent and cause migrations as they escalate. However, the intensity and period varies depending on the drivers and triggers such as social-marginalization and exclusion, politico-economic factors e.g. divisive politics, land alienation; institutional factors such as contested boundaries, weak land tenure rights, failure of policing and justice, environmental resource scarcities among others.

4.3.15 Conflicts caused by migration as a result of climate change then turning violent

During post drought migration, as the pastoralists return home because of plenty of pasture and water back home, they are tempted to raid to increase the size of their herds. Such conflicts are usually realized along the migratory routes. The harsh climatic conditions always drive the pastoralists away to search for pasture and water for their herds in the far lands. This normally creates pressure on the resources in the destination and may degenerate into violent conflict especially in multi-ethnic conglomeration.

4.3.16 Impacts of conflicts

According to Focus Group Discussions, loss of livestock is the greatest impact of conflicts in the County. Others reported negative impacts such as poverty, loss of lives, hunger and frequent migrations both cross border and inter-tribal. The women and children reportedly bear the harshest brunt of the impacts ranging from disruption of sources of livelihoods e.g. businesses, stress and depressions, loss of husbands, interrupted learning for the school-going children, increased labour like reconstruction of the manyattas, transporting the family luggage on their shoulders, starvation out of reduced access to milk and meat during the migrations either caused by shortage of pasture or conflicts.

4.3.17 Migration as an adaptation strategy

The earliest migration to have occurred from Turkana County as a result of natural resource (pasture and water) was to Uganda, Moroto to Kabong on the S. Sudan border in the early 1970s. Their continued stay was enhanced by the construction of a large dam in Ugandan side estimated to hold enough water to service the communities for over two years. The other pull factor besides the dam and pasture was the high level presence of the Ugandan military that provided security to the pastoralists. It is estimated that about 30,000 households have migrated and settled in Uganda. The population has since been growing and quite a number have been born in Uganda and have not been registered in either Kenya or Uganda bringing up the issue of a population that is stateless. However, plans are underway to register them (Ejore, 2016).

Migration to urban centres has been on the rise in search of alternative sources of livelihood in towns such as Lodwar, Lokichoggio, Kalakol because pastoralism is becoming unsustainable. The dominant push factor to urban centres is violent conflicts, for instance, in Lokichoggio there is an internal displacement camp hosting the Turkana community that came up as a result of incessant conflict by the Toposa community. Similarly, in Todonyang' and Kibish, many people have been rendered destitute and are staying at Lowarengak as a result of two massacres in 2011 between the Merille and the Turkana (Argeo, 2016).

4.3.18 Mechanisms for Peace

4.3.18.1 Directorate for Peace Building and Conflict Management

There have been efforts by the County Government of Turkana to foster peace regionally through the Directorate for Peace Building and Conflict management under the County Governor's office. The Director noted that climate change is fueling the conflicts and steps have been taken to address the issue through an integrated approach bringing together peace actors from the NGO's such as LOKADO (Lokichoggio-Oropoi-Kakuma Development Organization), KRCS in Turkana South and West, CBO's such as APEDI (Adakar Peace and Development Initiative), Riam Riam Peace Network (Turkana word implying togetherness), KARIMA, local community leaders and the national government through the National Steering Committee on Peace Building.

The notable achievement has been the realization of peace in Kainuk area where the Pokot and the Turkana communities have been in conflict over natural resources over the past several years. Currently, calm is being experienced since the adoption of this initiative in an

area considered to be a conflict hotspot. Mechanisms such as natural resource management through community elders have been actualized in Turkana East and Turkana West. The elders coordinate scheduling and sharing of water resource in addition to communicating early warnings of impending attacks (Ejore, 2016).

Other conflict management corridors targeted include:

- Kapedo in Turkana East focusing on the Samburu community
- Lokichar corridor targeting the Pokot community in Turkana South
- Loima in Uganda/Kenya border targeting Karamajong community
- Lokichoggio extending into South Sudan targeting Toposa community
- Todonyang' moving to Merille community in Ethiopia
- Lake Turkana corridor extending to Marsabit
- Peace building efforts have also been extended to the Karamoja area.

4.3.18.2 Lokiriama Peace Accord (1973)

The accord was initiated in 1973 to foster peaceful co-existence between the Turkana and the Matheniko community in Uganda. The social contract was arrived after long drawn inter-tribal conflict that led hundreds of lives lost over many years. The accord is celebrated annually by showcasing culture of the Matheniko and Turkana communities where it has been noted to have positive outcomes as it creates a platform for these communities to address issues that bring them together and also issues related to conflict. The peace agreements are reached during festivities known as the *Atanayeche/Moruanayeche* in September and December in Uganda. (Ejore, 2016; IOM, 2013).

4.3.18.3 Peace Caravans

Peace caravans have been spearheaded by the local political leadership at parliamentary level and the community elites. The leaders were drawn from West Pokot, Turkana, Baringo and Samburu counties convened at Nasal in Kacheliba Constituency and toured Lorengkipi in Turkana County where they reconciled the warring Pokot and Turkana communities. This initiative has helped reduce conflicts between these two communities. (Ejore, 2016)

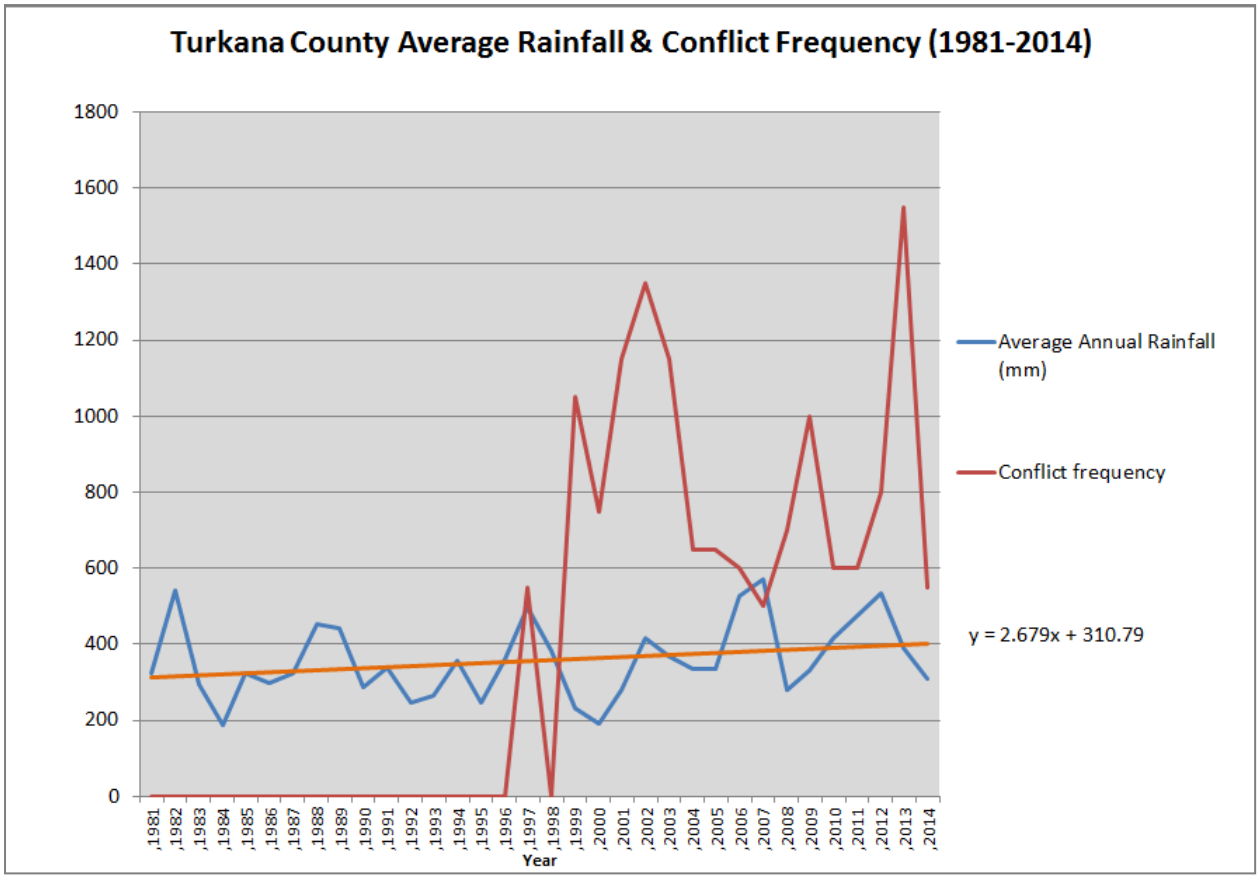

Figure 14: Turkana Average Rainfall and Conflict frequency

Source: (Kaoga, 2016)

Note: Unpublished

The peak of conflict incidences (see Fig. 14) match periods of low precipitation showing a positive correlation between them. Against this background, it is anticipated that with more extreme incidences due to climate change more cases of conflicts are likely to arise as locals compete for water and pastures. Therefore, there is a positive correlation between a dry spell and increased frequency of conflicts as depicted in conflicts and annual rainfall in Turkana County.

Table 9: Relation of vulnerability indicators to conflict

County	Indicator	Parameter	Vulnerability	Conflict
Turkana	Climate	Temperature	Drought	Very High
		Rainfall	Flood	Very High
	Biophysical	Land cover	High % change	Very high
			Low % change	Low
	Socio-economics	Population	High population	Very high
		Poverty	High level	Very High
		Education	Low Level	Very Highy
	Management	Policy	Bad Governance	Very High
	Institutions	Capacity	Low Capacity	Very high

Source: FGD, 2016

Table 9 above shows a summary of vulnerability indicators of the population to conflicts in Turkana County.

4.4 Case study 2: Samburu County

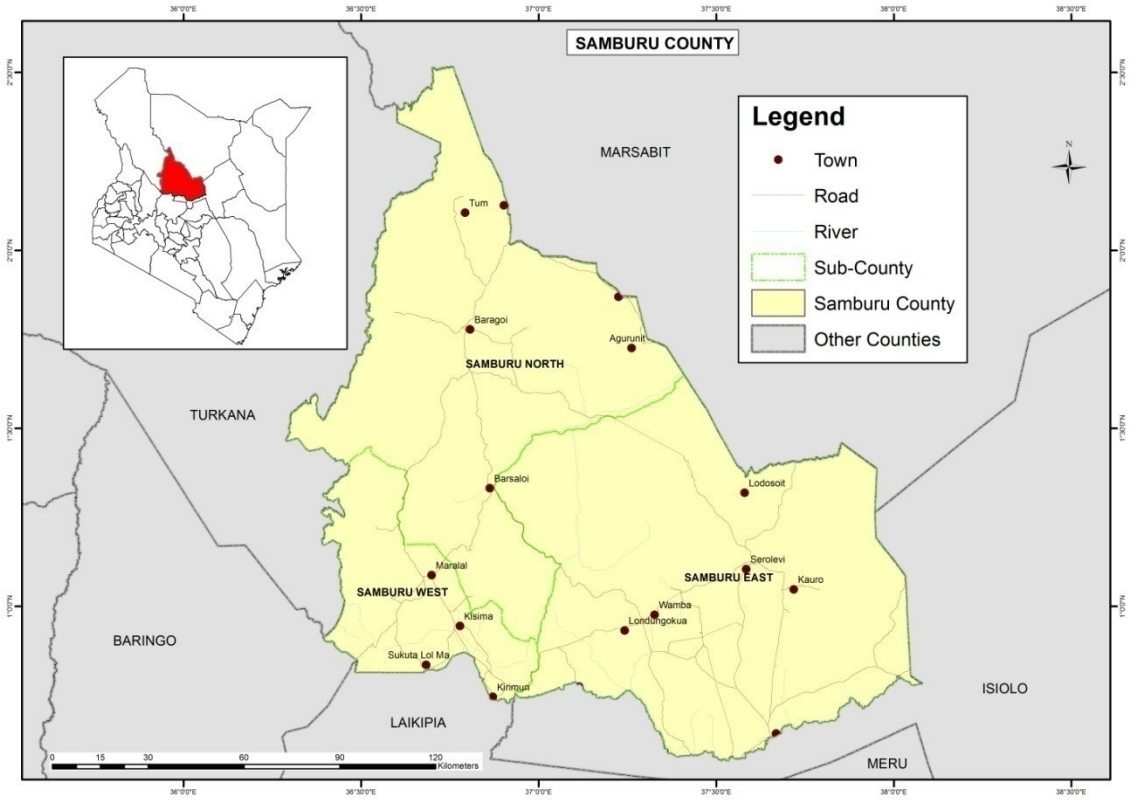

Figure 15: Map of Samburu County

Source: (Kaoga, 2016)

Note: Unpublished

4.4.2 Background

Samburu County lies between latitudes 0^0 40' North and 2^0 50' North of the Equator and longitudes 36^0 20' and 38^0 10' East of the Prime Meridian and covers an area of 21,022.27 square Km of which 3,288 square Km (15.5% of the County land area) is under gazetted forests, 170 square Km is under game reserves and sanctuary while 1.8 square Km is under surface water and shares its borders with four other counties; Turkana to the West and Northwest, Marsabit to the North and Northeast, Isiolo to the East, and Laikipia and Baringo to the Southwest (Kenya Information Guide, 2016; Samburu County Government, 2013). Samburu is home to 223,947 people (male - 50.01% and female - 49.99%), (KNBS, 2010). The Samburu people are nomadic pastoralists and closely related to the Maasai. Other ethnic groups living in Samburu County include Borana, Pokot, Turkana and Rendille. These groups are nomadic pastoralists who rear cattle, donkeys, camels and goats (Kenya Information Guide, 2016). Samburu has three administrative units; Samburu Central, Samburu East and Samburu North sub-counties

4.4.3 Natural resource trends

About 80 percent of the population in Samburu County relies on land to support livelihoods, activities such as charcoal burning, overstocking and crop cultivation in the catchment areas and wetlands has contributed greatly to the destruction of the environment (Samburu County Government, 2013).

The land use land cover maps (1986 and 2015) indicated that the area has undergone significant depletion of their forests and vegetation cover. Analyzing the land use land cover trend, show significant loss of forest land (38.88%), water bodies (31.88%) and wetlands (17.38%) (See Table 10 below). Moreover, the vegetation cover has also changed significantly with an increase in crop land (570.39%) Figure 16 and 17 shows the encroachment of cropland, grassland and scrublands into the forestlands. Bare area has increased by 1.82% and according to (Lalisa Duguma, 2015), Landscape can be degraded due to a number of reasons such as over use, natural disasters, e.g.(landslides, flood effects, droughts etc) and misuse e.g. Pollution, improper land use practices etc.

Table 10: Land use land cover for Samburu County 1986 to 2015

LAND COVER	1986 Area (Ha)	2015 Area (Ha)	% Change
Bare Area	66,734.40	67,950.50	1.82
Built Up	93.1	356.3	282.71
Cropland	4,844.70	32,478.20	570.39
Forestland	335,967.10	205,345.30	-38.88
Grassland	661,589.70	678,960.70	2.63
Riverine	21,825.10	30,988.40	41.99
Shrubland	1,048,800.20	1,077,178.70	2.71
Waterbody	12,825.10	8,736.90	-31.88
Wetland	472.50	390.40	-17.38
	2,102,385.40	2,102,385.40	0

Source: Kaoga 2016

Note: Unpublished

Droughts have become more frequent with increasing temperature. According to (Bett, 2016), it took 8-9 years for drought to reoccur but this has reduced 2-3 years. She noted that in the 1980s wetter seasons were more pronounced and predictable than in the last two decades which has had negative impacted on the biodiversity especially indigenous forest (*Juniperus procera* (cedar), *Olea europacea spp.cuspidatus* (wild olive), Podo etc.). Formerly the forest cover used to be vast: Kirisia/Leroghi (92,000 ha), Matthews range (94,000 ha), Ndoto's range (97,000 ha) and Mt. Nyiro (45,000 ha). However, the forest cover has decreased as

attributed to climate change and other factors such as encroachment for settlements, and cropland (refer to Table 10).

In Milimani area, Maralal, there is a Kenya Forest Service station but enforcement has been hindered by lack of resources and rapid urbanization (Omondi, 2016). Three factors causing damage to Kirisia forest include: logging, manyatta (farm) settlement and forest fires. In 2009 there were 620 manyattas present in the forest, 96 burnt areas / fires recorded, 27 burnt trees / small fires recorded and evidence of 318 indigenous trees logged (Powys, 2009). The reduction in forest cover has not only changed the local climate significantly, but also resulted to flash floods during heavy downpours in the low lands and further damage to the environment due to soil erosion (Bett, 2016) (Leseketeti, 2016).

The population has increased and people are now adopting sedentary lifestyles. A significant population in Samburu Central sub-County has moved into crop husbandry as way of coping with changing climate trends. Settlements have emerged in most fertile areas (highlands) and this has interfered with the routine migration patterns as communal land has been converted into private agricultural land. The privatisation of land has led to conflicts with not only the pastoralists who are in search of the pasture and water, but also with wildlife due to settlement on the wildlife corridors (Bett, 2016). Despite these challenges, pastoralism is still the dominant livelihood with some adjustments on the movement patterns whereby only the *morans* move with the livestock as the women, children and the elderly remain with small livestock.

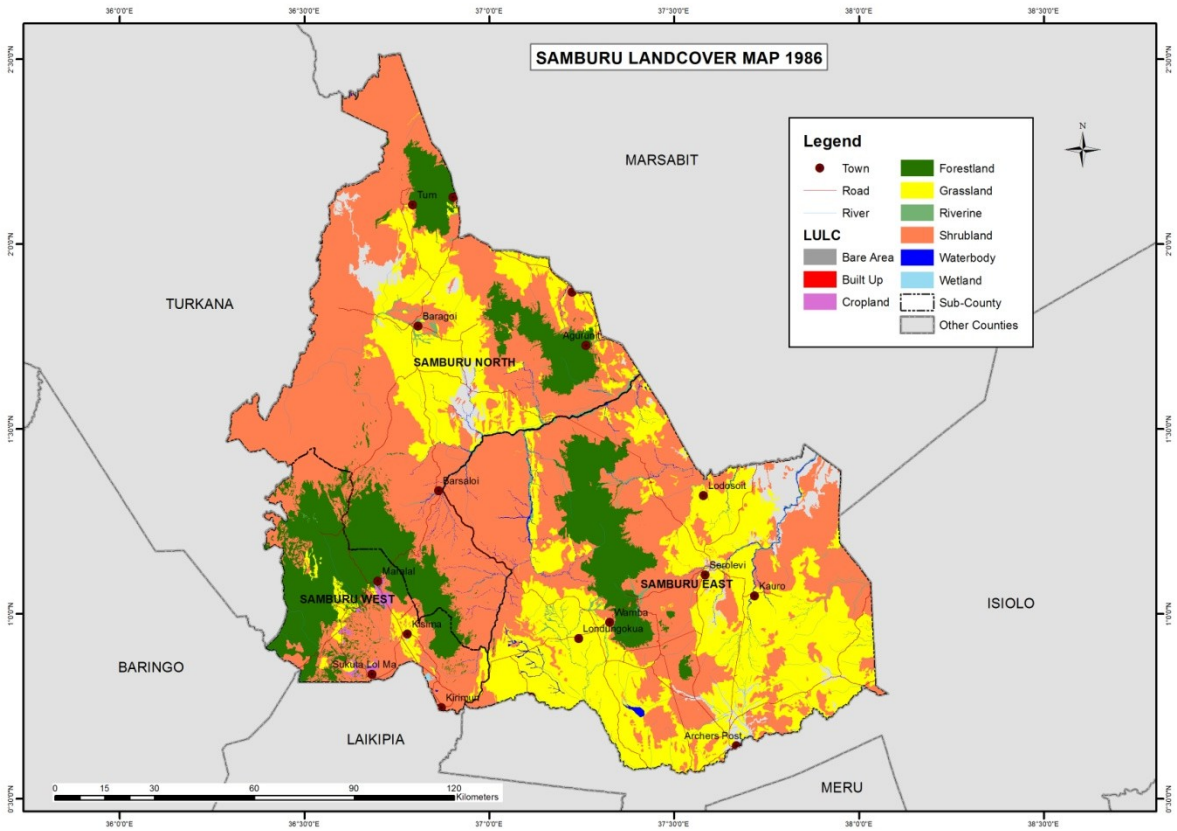

Figure 16: Natural Resource map - Samburu County 1979

Source: (Kaoga, 2016)

Note: Unpublished

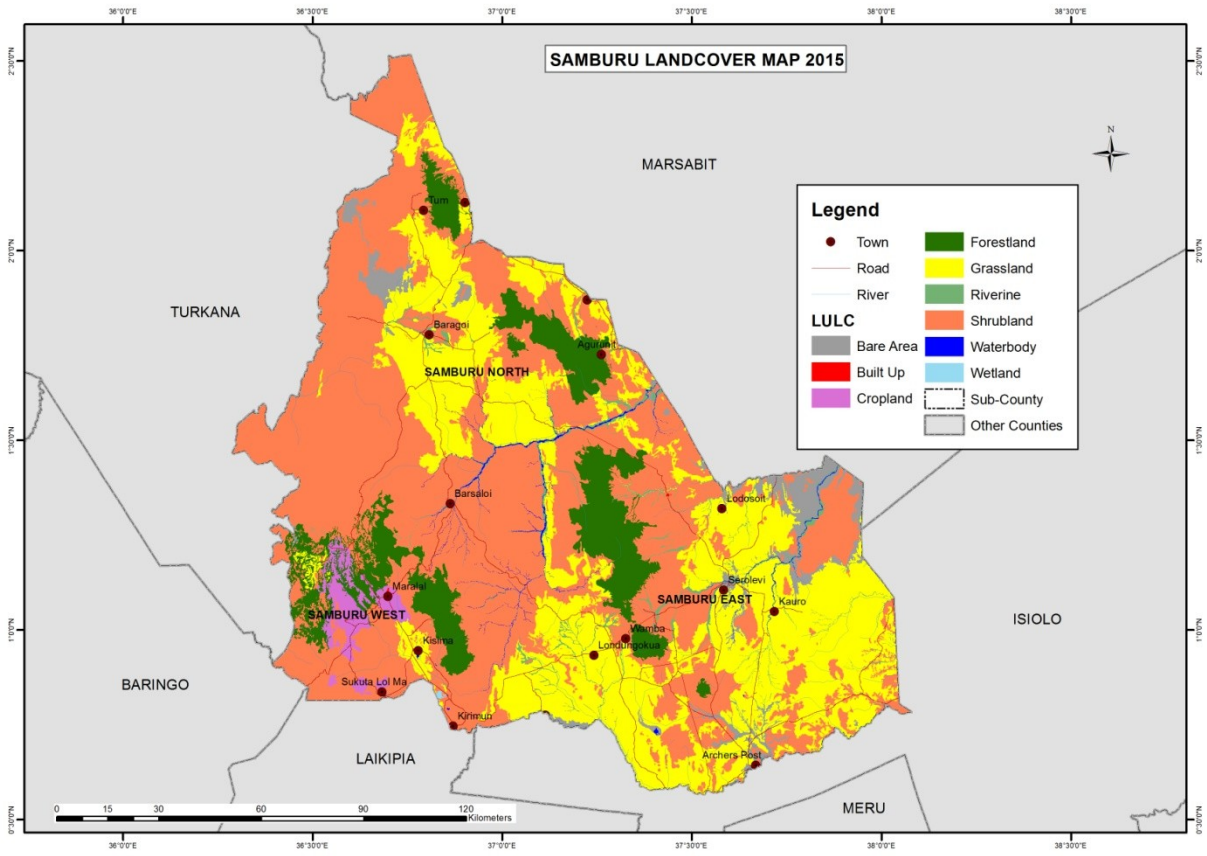

Figure 17: Samburu Landcover map 2016

Source: (Kaoga, 2016)

Note: Unpublished

4.4.4 Trends in Samburu

Samburu County is one of the driest counties in Kenya with temperatures ranging between 25°C during the coldest months (June and July) and 35°C during the hottest months (January to March). Samburu County receives bimodal rainfall with long rains (*Ngengerua*) received from March to May and the Short Rains *(Ltumuren*) from October to December (EU, Oxfam, Acted, & Concern, 2014). The average annual rainfall for agro-pastoral highlands is over 900mm while that of the pastoral lowlands is about 450mm apart from South Horr and Wamba areas, where it is usually delayed. (Samburu County Government, 2013).

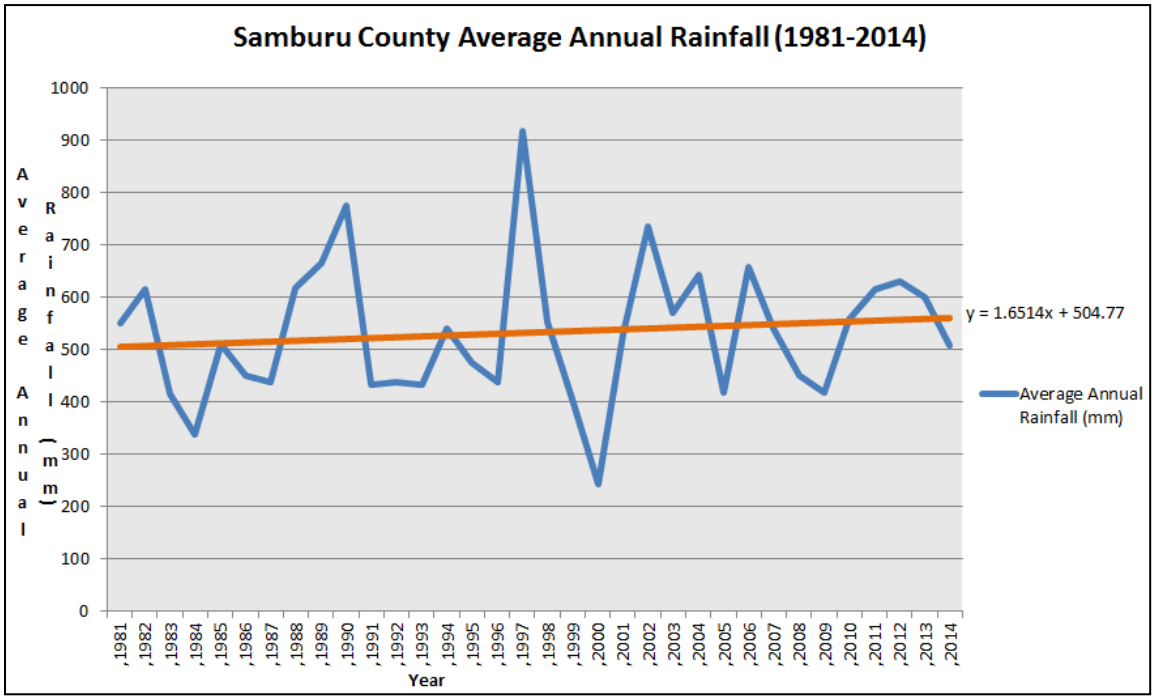

Figure 18: Samburu County Average Annual Rainfall (1981-2014)

Source: (Kaoga, 2016)

Note: Unpublished

Despite the analysis showing annual average increase in precipitation, the rains have become more sporadic, rapid and spatially biased towards the elevated areas. Against this backgroung, pastoralism is becoming unsustainable especially in areas receiving less than 450mm annually (Samburu County Government, 2013). Figure 18 above shows that 1982-1984, 1991-1994, 1998-2002 and 2008-2009 as the years that received rainfall below 450mm. Similarly (Kenya Information Guide, 2016).also noted that rainfall has become erratic and at times, some parts of the County receive no rain in a whole year. This observation is contrary to what they used to experience previously whereby the seasons were well defined. The unpredictable weather patterns have made it difficult as the soothsayers (*Laibons*) can no longer forecast accurately to advice on pastoral movements of the community.

The sub-counties average annual precipitation from 1981-2014 shows that Samburu West received more precipitation than Samburu East. A similar trend was reflected in inter- annual coefficient of variation for rainfall where the west had the lowest range of 0-22 whereas the East had the highest range of 36-61. This is an indication that seasonal precipitation pattern are more predictable in the West than in the East (see Fig. 21). The annual average

precipitation in the past 33 years showed that elevated areas received an average of 900-2245mm. while lowlands received 300-500mm annually (See Fig. 20).

The evidence of climate change in the County has been observed in terms of increase in variability of rainfall. Rainfall periods are becoming shorter and unpredictable and prolonged droughts are more frequent and severe. This has led to massive loss of livestock, poor crop yields and high prevalence of malaria and outbreak of livestock diseases, migration and displacement of people (Samburu County Government, 2013).

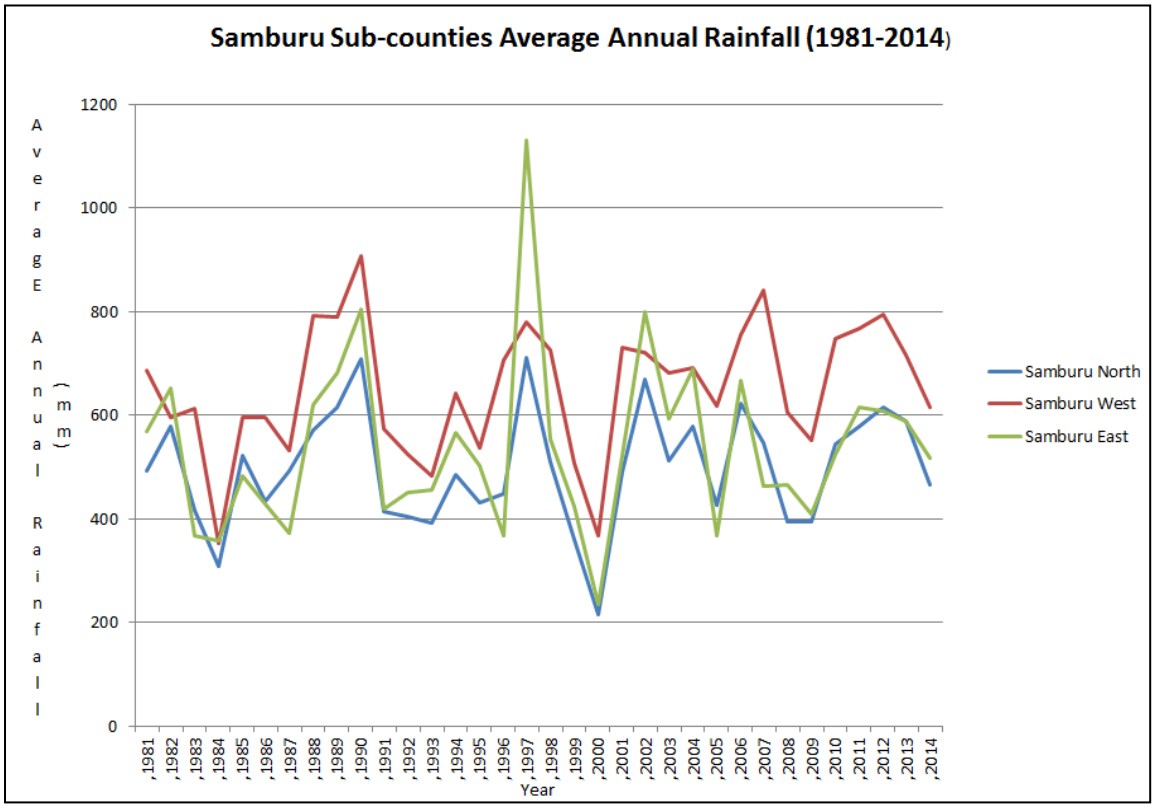

Figure 19: Samburu Sub-counties Average Annual Rainfall (1981-2014)

Source: (Kaoga, 2016)

Note: Unpublished

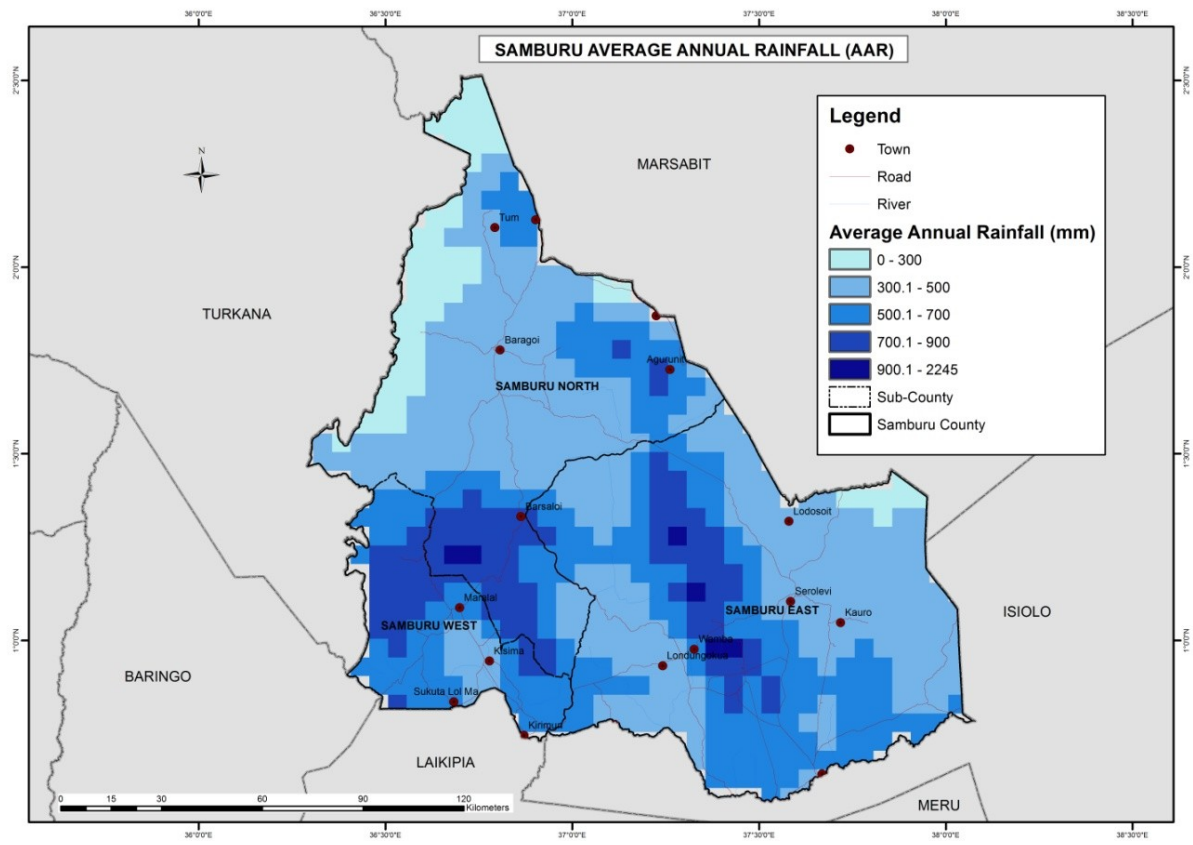

Figure 20 : Samburu Average Annual Rainfall

Source: (Kaoga, 2016)

Note: Unpublished

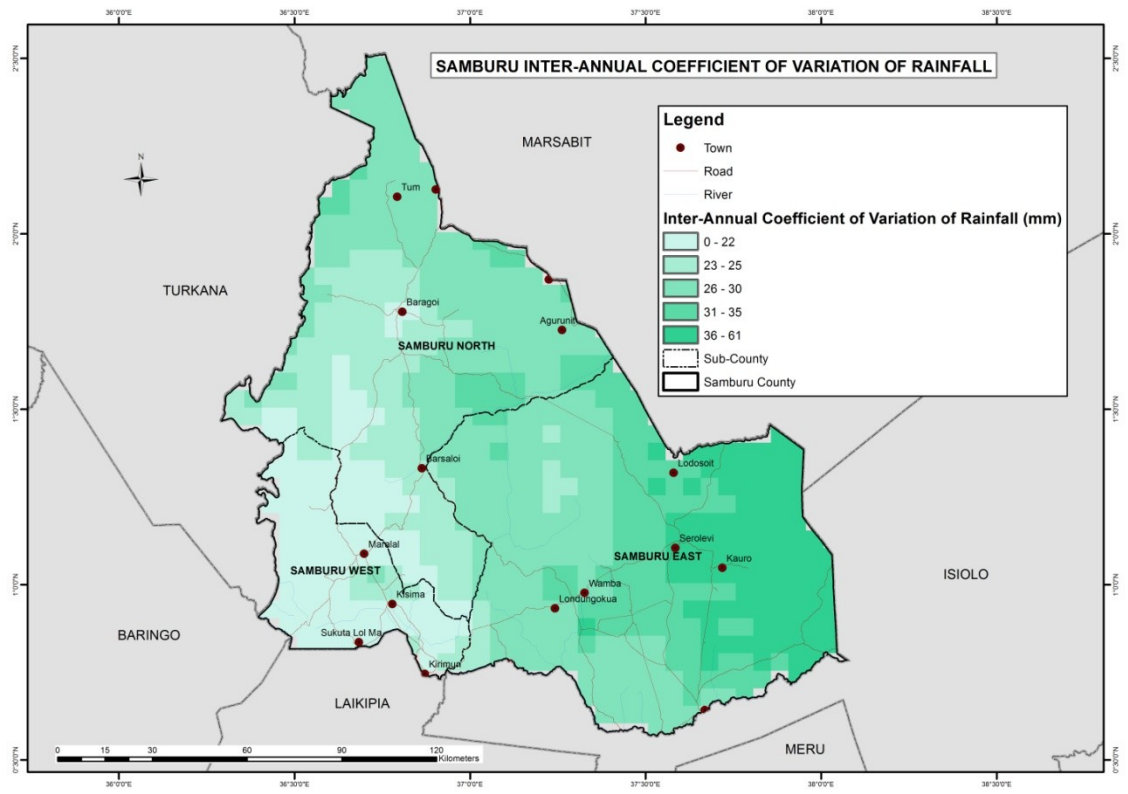

Figure 21: Samburu Inter-Annual Coefficient of Variation of Rainfall

Source: (Kaoga, 2016)

Note: Unpublished

4.4.5 Conflicts in Samburu

The Samburu have a longstanding history of raids that were done for cultural purposes (restocking only and there was less use of arms). Currently, the main drivers of conflicts are diminishing natural resources, institutional factors such as contested borders, political-economic factors such as land alienation and social factors related to historical marginalisation and cultural practises (Nyakundi, 2016).

4.4.6 Drivers

4.4.6.1 Climate change and natural resource scarcity

Climate and the associated environmental disasters, such as droughts and floods have resulted into forced migrations and competition over natural resources among the pastoral communities. These have negative consequences on political stability and conflict resolution. In northern Kenya, severe droughts that used to reoccur every ten years now occur more frequently (Huho, 2012; Shorr, 2014). The decrease in natural resource relates to degradation of the environment given that 80% of the population is relying directly on land for

livelihoods. Activities such as charcoal burning, overstocking and crop cultivation in the catchment areas and wetlands has contributed greatly to the destruction of the environment. The above practices coupled with low environmental education, weak enforcement of legislations, poor community participation as well as weak institutions at local level has contributed heavily to depletion in natural resources (Samburu County Government, 2013).

4.4.6 .2 Contested territories

There has been a long running dispute of ownership of land at Kapedo, Suguta and Marti, an area occupied by three communities i.e. the Turkana, Pokot and Samburu. These communities claim ownership over resources on the disputed land. This problem is aggravated during periods of droughts and prior to elections. Moreover, the divisive politics have hampered peace efforts, especially in Suguta Valley.

The County Government and the National government have demarcated buffer zones and employed *morans* from the conflicting communities to act as guards and also, to foster cohesion especially in Amaiya and Malaso which are considered to be their point of convergence. These zones are protected and this has helped conserve the rangelands. This has resulted in significant regeneration of the ecosystem which needs to be scaled up to other areas. Table 11below show conflict areas mainly around Isiolo and Laikipia zone (inter-County) and Baragoi zone (intra-County)

Table 11: Cross-Border conflict areas

Border area	**Actors**
Longewan	Samburu, Pokot
Marti, Suiyen	Samburu, Turkana
Kiribon	Cattle Rustling corridor
Waso East	Isiolo, Samburu
Archers Post	Turkana, Isiolo and Samburu
Porro	Pokot, Samburu

4.4.7 Political-economic factors

4.4.7.1 Land alienation and territorial expansion

The formation of group ranches and conservancies has escalated polarization of the pastoralist groups in the County due to exclusive use of land by a few individuals. This was evident during the establishment of Ltungai conservancy where, access to grazing land by the

Pokot in the Southwest had been curtailed considering that formerly they had unlimited access the area. This led to hostilities between the two communities as it was seen as a ploy by the Samburu to have exclusive access to the area. Moreover, Sera and Lerukki conservancies have faced similar challenges as the Rendille, Borana and Somali pastoralists felt aggrieved by the restrictions imposed on their rights to access pastures and water.

There are 78 registered group ranches and the main challenge is inter clan conflict which has led to delay in land adjudication with exception of Mararal town, Porror area, and Kisima area. The County government is in the process of dissolving 42 group ranches out of 78 to address the problem of land alienation (Nyakundi, 2016).

4.4.7 .2 Cultural practices

Cultural practices such as payment of dowry using livestock has also sustained raids amongst the pastoral communities in Samburu and neighbouring counties. Marriage agreements are purely base on livestock which creates demand for more animals to sustain their culture. Furthermore, the community's expectation on the higher numbers of livestock for payment of dowry which promotes more raids.

4.4.7.3 Marginalisation

Samburu County hosts the Samburu, Pokot, Turkana and Rendille ethnic groups and since independence, the Samburu's have had hegemony over the other groups. This has bred discontentment from the minority groups e.g . Turkana's are considered aliens by the Samburus' (Wachira M. , 2012; Wachira & Ogemba, 2012)

The participants in Focus Group Discussions from Turkana confirmed that in as much as public participation is requisite for any law to be passed at County level, their inputs are hardly sought. This also came out during field observation whereby it was noted that marginalisation has political angle. TheTurkana community representatives' pointed out that the Samburu politicians did not want them to register as voters. According to them, the stalemate in Baragoi and Suguta Valley will end when they are incorporated in the political process (Wachira & Ogemba, 2012). Meanwhile, neighbouring Turkana County leaders felt that they were unfairly targeted by the government through deployment of the Kenya Defense Forces for disarmament in 2012 as the Pokot and Samburu were not disarmed (Wachira M. , 2012).

4.4.8 Triggers of conflict

There are various triggers of conflicts among the Samburu, Turkana and Pokot communities. However, these triggers are dynamic and are characterized by confounding factors. These include but not limited to competition over control and access to natural resources (land, pasture and water), intensified cattle rustling, proliferation of illicit arms, inadequate policing and state security arrangements, diminishing role of traditional governance systems, political incitements, ethnocentrism, increasing levels of poverty and idleness amongst the youth, among others (Likaka & Muia, 2015).

4.4.9 Conflict Hotspots

The conflict hot spots areas in Samburu are: Longewan, Purra, Porro, Siraa, Lokurate, Lolmorok, Losuk, Siambu, Morijo, Ameyan and Kapedo (Nyakundi, 2016). Pastoralists have increasingly been fighting over pasture and water outside of their traditional grazing areas owing to recurrence of drought in short cycles.

4.4.10 Actors and Hotspots of Conflicts

The principal actors and or aggressors of conflict in Samburu are Turkana from Turkana County (Baragoi division) and the Samburu themselves. Other actors are the Pokot from Baringo County and Rendille from Isiolo County. The study noted that nearly all cases of conflict involved the *morans*. It is believed that conflict process is accelerated by the actions of political leaders and *Laibons*.

Table 12: Conflict Hotspots in Samburu County

Site	History	Type of Conflict	Causes	Actors
Morijo	1970-1978	Intergroup (resource based)	cattle raiders	Pokot
	1978-1980	Intergroup (resource based)	cattle raiders for Revenge	Samburu
	1992-1996-2000	Intergroup (cattle taken away)	cattle raiders	Turkana,Samburu
	2005-2012	Intergroup (Resource based)	land dispute pasture and water (2005 drought)	Samburu, Pokot
Siambu/malaso	2006-2008	-intergroup Livestock based (cattle raiders)	pokot raiders due to restocking (2005	Pokot,Samburu

		-cattle stolen over 100	drought)	
	2008-2010	-Intergroup	Revenge by the Samburu youth	Samburu youth
	2011 August	-Intergroup(resource based-over 150 cattle taken	cattle raiders	Turkana,Samburu
Purra	2006-2007	-intergroup(resource based)	cattle raiders, 2005 drought in Pokot	Pokot,Samburu
	2009 Dec	intergroup(resource based)		Pokot,Samburu
	2008-2011	-intergroup(resource based)	cattle raiders(Goats stolen)	Pokot,Samburu
Longewan	-2006-2008	-intergroup (resource based)	Lost cattle	Pokot,Samburu
	2008-2009	-intergroup (livestock based)	Revenge	Pokot,Samburu
	2009-2010	-intergroup (resource based) pasture	Grazing land	Pokot,Samburu
	2010-2011	-interpersonal (livestock based)	Theft from Samburu youth	Samburu youth
Kanyaman	1971-1974	Intergroup (resource based	Expansionism of the Turkana's into Samburu	Samburu & Pokot against the Turkana
Lokorkor	1996	Intergroup (resource based)	Grazing land	Samburu & Pokot against the Turkana
	2002	Intergroup (resource based)	Expansionism	Samburu, Pokot
Marti, Baragoi Division.	1978-1979	Intergroup (resource based)	Cattle raid	Pokot vs Samburu and Turkana
	2015	Intergroup, (resource based)	Cattle raid	Samburu, Turkana

	2016	Intergroup Where 8 were killed and another 8 injured and cattle stolen in dawn attacks	Cattle raid	Samburu, Turkana
Waso Rongai 12 km from Baragoi	1996	Intergroup (resource based)	Theft	Borana, Samburu
	2009	Intergroup (politics)	Pastures	Turkana, Samburu
	2012	Intergroup (resource based, over 266 cattle taken, 12 people admitted to hospital)	Theft from Turkana	Turkana,Samburu
	2013	Intergroup (3 dead, 6 casualties)	Pastures	Turkana, Samburu
Lomerok 20 km from Baragoi.	1997-2000	Intergroup (resource based), ethnocentrism	Cattle rustling, pastures	Samburu,Turkana
	2006	Intergroup (resource based)	Cattle rustling, pastures	Samburu, Turkan
	2004-2012	Intergroup (resource based) 501 livestock stolen from Samburu, 42 police officers killed	Cattle rustling, pastures	Turkana,Samburu
	2012-2014	Intergroup, political, ethnocentrism	Theft from Samburu, revenge, grazing land	Samburu
	2015 May	Intergroup, 8 people died, no livestock stolen	Retaliatory attack	Turkana, Samburu

Archer's Post, Losesia	2009	Intergroup, resource based, 3 people died, over 3765 head of cattle stolen, 2,635 goats, 141 camel led to displacement of 1,200 people	300 armed Borana and Somali gunmen attacked Samburu.	Somali and Borana vs Samburu
	2015	Intergroup, tribal conflict 17 people dead, 620 families displace	Cattle rustling	Somali, Borana, Samburu
Kawap (Baragoi)	1998	Intergroup (resource based and expansionism)	Cattle rustling	Turkana,Samburu
	2007	Intergroup (resource based and expansionism)	Cattle rustling	Turkana, Rendille
	2012	Intergroup (resource based and expansionism)	Theft by Turkana, revenge	Turkana,Samburu
Nachola	1999	Intergroup- resource based	Revenge by Samburu	Pokot,Samburu
	2015	Intergroup- 3 died, 400 livestock stolen	Theft by Pokot, revenge	Pokot, Samburu
Suguta Marmar Losook	2006	Inter group (resource based) 3,000 people displaced for eight months	Cattle rusting, banditry	Turkana,Samburu
Parkati	1998-2002	Inter group (resource based)	Banditry, pastures	Turkana,Samburu
	2008	Inter group (resource based)	Banditry, pastures	Turkana, Samburu

The conflict hotspots (Figure 22) was an output from participatory mapping process which identified key hotspots around Suguta Valley and Baragoi in Samburu North, Amaya division in Samburu West and Kuaro, Larisoro and Archer's post in Samburu East County.

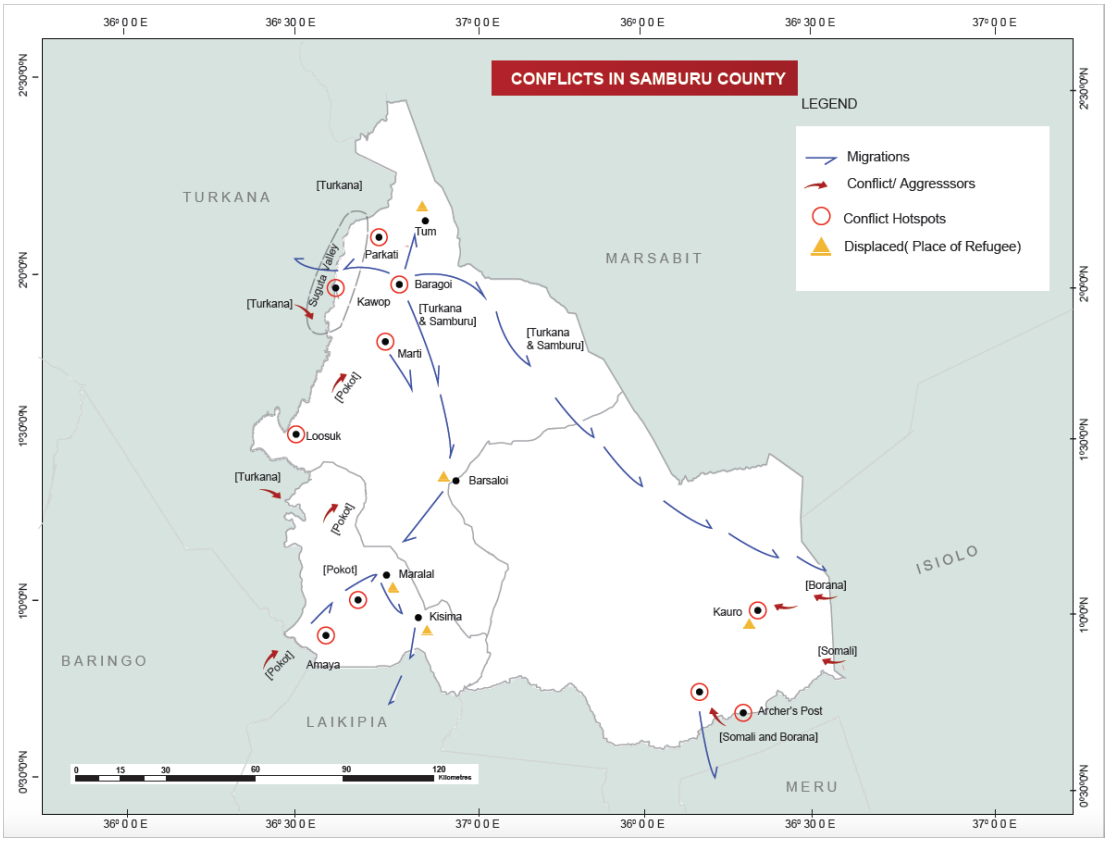

Figure 22: Conflict map of Samburu County

Source: (Kaoga, 2016)

Note: Unpublished

4.4.11Conflicts arising from effects of climate change in Samburu Central and East

In Samburu Central, we have conflicts arising from the convergence of Pokot, Turkana and Samburu communities over natural resource. The study noted that some of the Pokots came from Baringo County while others are residents of Samburu County. It further noted that, the Samburu from the lowlands and Pokot' from Baringo County converge in Loosuk and Suguta Marmar during dry seasons. The other areas with similar predicaments are: Morijo, Poro, Leroki and Purra. Thus, flash points of conflicts have been witnessed in these areas as the communities compete for pasture and water

Pull factor such as availability of pastures in the agro-pastoralist zone (precipitation averages of 700-900mm annually) e.g. Loosuk and Suguta Marmar wards. Similar, in the protected zones like Leroghi forest, Matthews range forest and some parts of Samburu National Park which the pastoralists cannot access these areas.

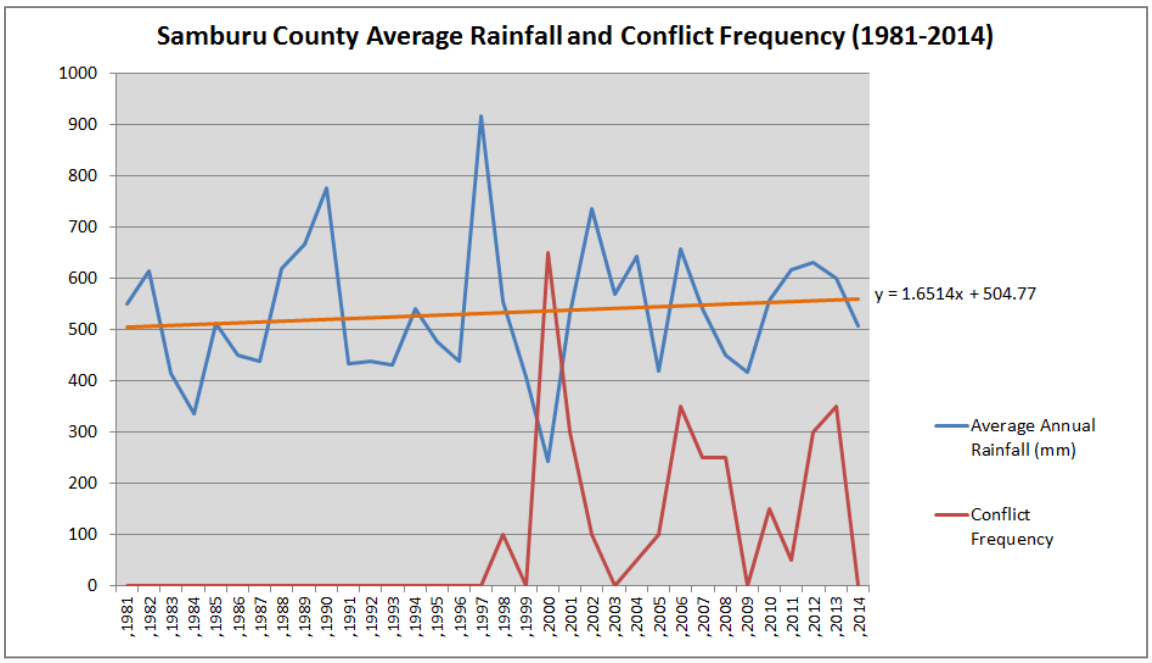

Figure 23: Samburu Average Rainfall and Conflict Frequency (1981-2014)

Source: (Kaoga, 2016)

Note: Unpublished

There is a relationship between precipitation and occurrence of conflicts. A trend analysis from 1981 to 2014 for conflict indicates that there is an increase in conflicts when the precipitation decreases, especially in the mid 1990's into the 2000's. The increase in precipitation from 2000 to 2002 was marked by a corresponding decrease in conflicts. However, as the rains decreased in 2003as the conflicts also increased. There was an increase in conflict with an increase in precipitation in the year 2005 to 2006, though this was marked with a drought in East Samburu and Baringo County which led to fighting between the Samburu and Pokot over resources (Irin, 2009). In addition, the spillover effect of Samburu drought in 2009 led to massive population displacement and deaths from conflict over control of water points and pasture outside the County. This led to15 deaths in the infighting between Somali and Samburu pastoralists in Oldonyiro and Isiolo central division and a total 40 people died in the three districts (IRIN, 2009).

4.4.12 Migration of Pastoralists

Migration in Samburu County is characterised by movements to the humid mountain areas during dry seasons and lowlands in the wet season. The pastoral zone is in North Samburu and the wet grazing areas are Baragoi, Elbarta, Masikita, Soito and Suyan areas while in Samburu East the areas include; Lodungokwe, Koiting, Lerata, Matakweni, Ngilai, Sessia, and Wamba. In Samburu Central part of which is an Agro-Pastoral Zone, the wet grazing areas include Ledero, Kisima, and Lorroki plains, Longewan/Amaya, and Mbukoi (Bett, 2016). According to the FGDs, 1970s' and 1980s', Samburu was self-reliant with sufficient pasture and water and migration routes were well defined. Table 13 below shows the former routes used by the pastoralist in Samburu County:

Table 13: Traditional Migration Routes

Samburu East	
Route I:	Wamba, Lodungokwe, Swaari (*Jan-Feb*) →Sarara (*March*)→ Kauro → Kom (*June*)
Route 2	Lodungokwe → Ngutuk → Kauro (May/June)
Route 3	Swaari → Ngilai → NdonyoWasin →Kauro → Kom (*June-July*) → Lodungokwe Kirimion (*August*)
Route 4	Wamba (*September*) →Kirimon→Laikipia→Wamba (*October*-January) → Kauro→ Marti → Ngilai/Swaari → Ndonyo Wasin
Samburu North	
Route I:	Baragoi (Laon=) →Latakweny→Ntolin→Wamba→(back to Baragoi)
Route 2	Nyiro (October-April) → Serolipi (Samburu East)
Route 3	Baragoi + Samburu East + Samburu Central (August)→ Marti/Mbukoi
Route 3	Laon (October-November) → Marti→Suyan→Morinjo→ Original grazing areas
Route 3	Lolmogo (January) → Muruangai (October) → Lorok Lolomog (December)
Samburu Central	
Route I:	Samburu central (original villages) (May-September) →Kirimon→Laikipia→Nanyuki→Timau (during severe droughts)
Route 2:	Samburu central (original villages) (May-September) → Kirimion →

	Laikipia → Rumuruti (March) → Maralal (May)
Route 3	Samburu Central (original villages) (May-September) →Kirimon→Laikipia→Rumuruti (March) →Kirimion (April)

Source: (EU, Oxfam, Acted, & Concern, 2014)

4.4.13 Pastoralist's migration influenced by climate change in Samburu County

The study noted that the Samburu pastoralists are moving further South into Nakuru County due to climate change e.g Samburu East sub-County through Laikipia into Gilgil in Nakuru County. They are also moving further North into Turkana County from South Horr and Tuum towards Lake Turkana and this has leads to conflicts with the Turkana and Pokot over the resources especially in Lomelo. Other movements by the Borana, Samburu and Turkana pastoralists is towards Archer's Post and Ngare Mara in Isiolo County and this has been a conflict zone over the years (Argeo, 2016).

When the pastoralists are coming back into Samburu, conflicts occur during restocking (a cultural practice) and incidences of cattle rustling drastically rise after droughts. As the livestock is moved from Lomelo in Turkana County, there is an increase in incidences of East Coast Fever (ECF) and Foot and Mouth disease and to contain the problem, market restrictions are placed and this leads to further internal conflicts as the pastoralist cannot off take their livestock, this leads to poverty which triggers conflicts through highway banditry and market robberies (Argeo, 2016)

4.4.14 Conflict Management

4.4.14 .1 Traditional Resolution Efforts

The role of traditional elders in conflict resolution has gained prominence as one of the viable routes to effective peace-building among pastoralists communities. The council of elders is composed of respected elders and respective heads of the *nabos,* the highest socio-political institution of managing conflicts amongst the Samburu, especially internal conflicts (PRAGYA). One of the earliest known peace pact was by the Pokot and Samburu in early 1900s' at Mt. Elgon.This ensured peaceful coexistence and partnership in cattle raids, this was further renewed in 2001 at Amaya (Masinde, Muhamud, & Pkalya, 2004) only to be violated in 2004 after which violence erupted between Pokot and Samburu and went on until 2009.

The use of traditional peace building mechanisms has often taken the form of compensation and fines to settle disputes and avert cases of retaliation among the Pokot, Samburu or Turkana communities. In many cases, inter-communal penalties and fines in terms of cattle or even cash have been agreed upon by sets of elders from different communities in attempts to foster peaceful coexistence and joint utilization of common resources such as pasture and water points (Okumu, 2013).

4.4.14 .2 External Resolution Efforts

4.4.14 .2 .1 Laikipia Peace Caravan

Laikipia Peace Caravan is a non-state actor in conflict resolution and peace-building efforts among the Pokot, Samburu and Turkana communities. It was conceived by the coming together of local professionals to promote inter-community peace-building among communities living in East Pokot, Samburu East, Samburu West, Samburu North (Baragoi), Samburu Central and Laikipia West, Laikipia North and Turkana South districts. The need for Laikipia Peace Caravan (LPC) was necessitated by the failure of government agencies to address insecurity and violence orchestrated mainly through cattle raids and banditry among the Samburu and the Pokot which started in 2004 and culminated into the Kanampiu Massacre in Laikipia North where 31 Samburu and 11 Pokot mostly women and children perished on 15th September 2009 (Okumu, 2013).

4.4.14 .2 .2 The Turkana-Pokot-Samburu Pastors Cross-Border Conflict Management Initiative

The organization operates in the three regions and is focused on the Turkana, Pokot and Samburu communities. The initiative began in 2010 with the aim of encouraging and promoting adoption of peace mechanisms by the 3 communities to resolve their conflicts amicably and also encourage sharing of natural resources and harmonious co-existence (PRAGYA).

The inter faith platform, consisting of pastors and other religious organization which form part of Regional Assembly Peace Forum. They take part in initiating consultation, reconciliation, disarmament and common sharing of resources among communities. Their consolidated peace initiative aims at investing towards efforts to restore normalcy where chaos reigned. The Pastors stepped in through their pastoral influence to convince the respective the conflicting communities (Apeyo, 2012).

4.4.14 .2.3 The Kenya Red Cross Society (KRCS)

The Kenya Red Cross Society has continued to provide humanitarian assistance to victims of conflict between Samburu and Pokot in Nachola, Samburu County. Kenya's pastoral communities of Turkana and Samburu are also set to benefit from peace initiatives and conflict management skills from KRCS (PRAGYA).

The organization has done a lot in provision of water, sanitation and health services during period of crisis such as droughts, floods and in times of conflict. They engage the conflicting communities through cash-for-work programmes to improve infrastructure as the same time promote cohesion and integration among them.

KRCS has a strategic approach that focuses on long term projects that are climate smart, for instance, in North Horr, 50ha irrigation project has been successful in improving the pastoralists resilience to climate change and has been handed over to the County Government (Wambugu, 2016).

4.4.14 .2.4 Caritas Maralal, Cordaid, World Vision and Children Peace Initiative Kenya (CPI-Kenya)

Caritas, Cordaid, World Vision and Children Peace Initiative have programmes focusing on peace building through using children to promote peace. Caritas, Maralal with the help of various partners is trying to bring connector projects to help bring communities together; putting up schools along border areas amongst various conflicting communities to integrate the Pokot, Turkana and Samburu children. This is meant to demystify a perception propagated by their parents, that people from other communities are enemies (Lesooni, 2016).

Through this approach, CPI-Kenya is working in primary schools through peace clubs. This was necessitated by the realization that it was almost impossible to achieve peace with adults unlike children. These clubs work with children from Samburu and Pokot, pairing them up and encourage friendships. The networks is later extended their parents and families members. This initiative has help build bridges especially where communities who are at one point perceived each other as enemies and could not set foot on each other's land for instance Longewan, Peleshian, Logorate and Lemaiya along the Samburu-Baringo border are now experiencing peace (Keti, 2015).

Other programmes have been initiated by Acted and World Vision to improve the economic situation. These focus on alternative livelihoods, as an adaptation strategy against climate change. Such project targets the young people and women who engage in income generating activities such as poultry farming and greenhouse farming. However, these have low uptake since most of them are first timers (Argeo, 2016). The adoption of these will reduce dependency on pastoral system which is natural resource based.

CHAPTER FIVE

5 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study noted that natural resource based conflicts among different ethnic groups due to competition over access to scarce resources has always existed. However, they have become more frequent and deadly despite peace initiatives and measures in place to enhance communities' resilience to cope with severe droughts. Most conflict incidences were reported during dry spell, an indication that climate change has exacerbated their occurrence. Pastoralists are migrating beyond their original migration routes due to reducing pasture within their grazing belt. Therefore, interactions between different ethnic groups spark conflict.

The study also noted a positive correlation between increase in drought episodes and conflicts as shown in Figure 14 and Figure 23. Moreover, decreasing natural resource base in Turkana as indicated in the land use land cover (LULC) shown in Figure 6 has exacerbated unprecedented forced migrations to territories crossing over to the neighboring international community's especially to Uganda, South Sudan, and Ethiopia.

Natural resources (grazing land and water) account for a sizeable share in fuelling conflict. Therefore, clear policy guide lines on issues to do with management and utilization of water resources are required. The study also noted that conflicts are likely to arise at water points especially in pasture areas. However, other factors such as political interests and traditional customs could not be ruled out. In both case study areas, conflicts have increased economic hardship as the only livelihood option, pastoralism, has been ravaged.

Despite government taking proactive steps to protect pastoralists by deploying more security personnel, its effectiveness is not clear. The study noted that inadequate security enforcement in both Turkana and Samburu Counties is because security personnel are either unable or unwilling to confront cattle rustlers who are well armed. Insecurity leads to formation of local vigilante groups popularly known as home guards who acquire small and light weapons for self-defense. The weapons used by these vigilante groups are also used during cattle rustling leading to more conflicts.

5.2 Recommendations

Based on the findings, the following recommendations should be considered:

(a) Enhance mediation and conflict prevention capacities of the communities.

This will be attained through training on indigenous peace building processes, strengthening traditional conflict resolution mechanisms and involving village elders in peace negotiations. Since local elders have communal authority, their roles in peace building will reduce conflicts significantly.

(b) Enhance early warning

The police, courts and relevant government agencies should inspire confidence among locals in their operation. This will improve the speed and reliability of information between local and government to conflicts before they occur.

(c) Awareness creation

Mass media organizations should also be incorporated in peace initiatives and campaigns such as promotion through local radio and T.V. broadcasts.

The County governments should incorporate public awareness campaigns through peace caravans which should include all the actors (Turkana, Pokot, and Samburu).

(d) Infrastructure development

Infrastructure development in the ASALs was neglected in the past in resource allocation. Better roads, schools, churches, dispensaries, irrigated agriculture and markets where none existed will make these regions accessible and open to business opportunities.

(e) Alternative livelihoods

NGOs, FBOs and County governments should raise awareness and educate the communities to avoid full reliance on pastoralism which is natural resource based to on alternative livelihood e.g. promotion of eco-tourism, small-scale business enterprise, basketry and artisanship. In addition, these efforts aimed at reducing the number of stock as pastoralist's communities arm themselves for fear of losing their livestock leading to conflicts.

(f) Boundary review

Land reforms should take into account pastoralists' mobility needs since boundaries may limit free grazing. Each County should map grazing fields for planning for dry seasons in order to contain pastoralists within their borders.

(g) Inter-community dialogues and agreements

Peace meetings facilitated by non-partisan institutions should bring elders across communities living in the region to create understanding among them, come up common plans irrespective of ethnic background from initiation to the final process of signing of agreements and beyond. Through this approach, implementation of different policy frameworks will meet less resistance.

5.3 Way forward

Collaborative Initiatives should be carried out by Community Based Organizations, Faith Based Organizations and Non Governmental Organizations working together with County and National governments. This collaborative approach is likely to yield better results in solving inter-communal conflict in Northern Kenya. Furthermore, the study proposes support for indigenous peace initiatives as a sustainable means of settling disputes among the conflicting communities.

5.4 Areas for Further Studies

- The impact of oil discovery on socio-economic prospects and environmental sustainability in Turkana County. If this is not well handled, it could be a major source of conflict in the future.
- The use of conservancies on pastoral system as an adaptation strategy to climate change in Northern Kenya.

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7 APPENDICES

Appendix 1: Interview schedule

(a) Take stock of knowledge and evidence

(i) What is the general understanding of climate change among the populace of this County

(ii) Could you comment on the historical account of the demographic trends and resource-base in this County?

(iii) What are the current migration patterns in this County?

(iv) During what times do you experience more conflicts and/or migrations?

(v) What conflict resolution mechanisms are available and applied?

(vi) Of the mechanisms stated which ones have been successful or otherwise?

(vii) Is there a regular pattern of conflicts and migrations in this County? If yes how do you as stakeholder prepare to handle them?

(b) Assess the vulnerability, impacts and adaptation mechanisms

(i) In your view, is there a relationship between climate change and conflicts that go violent in this County? Please comment on your response.

(ii) Please comment on the types of conflicts experienced in this County based on root cause and triggers

(iii) Briefly highlight on the impact of climate change on the livelihoods of residents of this County

(iv) Could you comment on who are most affected during the conflicts and what makes them the most vulnerable?

(v) Based on your experience and knowledge, highlight on the climate change related conflicts and migrations (both cross-border and intra-communal) within the last 5-10 years

(vi) Please comment on the migrations and the challenges/risks involved as pastoralists move from one place to another

(vii) By the way, migrations and establishing new settlements might require certain arrangements more especially to the destinations, how do your people handle this delicate balance based on the thought that the migration could have been caused by lack of resources from the origin and the same resources could be meager in the destinations?

(c) Governance and policy

i) Is there any policy addressing internal violent conflicts and migrations in this County?(comments on efficacy)

ii) In your own assessment is the government involvement satisfactory, what else would you propose to remedy the impacts of conflicts and migrations in the County

iii) Do you have a County climate change management strategic plan? If yes, how often is it reviewed?

iv) Is the public involved in the drafting of the County policies and/or strategic plans?

v) Please comment on the climate change management plans for your County as a key stakeholder involved in County/National policy making.

(d) Migration and adaptation

i) What are the key triggers of migration?

ii) How are the migrant's needs addressed-on transit and upon settlement?

iii) Kindly comment on the adaptation mechanisms of the migrants and the sustainability of their livelihoods (water, food, shelter, medication, education etc.)

iv) Please comment on the efficacy of the adaptation methods adopted by the pastoralists and agro pastoralists?

v) In your opinion, what are some of the long lasting strategies that could be applied to improve adaptability and sustainability over time?

vi) What Coping mechanisms have been devised to enhance livelihood during the adverse impacts of the conflicts especially over the natural resources-water, pasture or land?

vii) Could there be any emerging migration patterns alongside the existing ones such as the routine migrations during adverse times.

e) Identify existing capacities

(i) What existing peace initiatives in the County can be up scaled to sufficiently address the conflicts?

(ii) What traditional and indigenous knowledge are there to deal with conflict situations?

f) Key actors and roles

(i) Who are the key parties involved in the conflicts (clans men, government, aliens)

(ii) Who are more visible in response to conflicts (Ministries, County government, NGO'S, media e.t.c.)

(iii) Which roles do they take?

(iv) Identify stakeholders on the periphery who need to be more involved

(v) Does the County have a coordination structure of managing the conflicts and migrations?

(vi) Is there a structured format to coordinate with the national government?

(vii) Who are responsible for the implementation of peace initiatives?

g) Sources of funding

(i) What funding sources are available for responding to climate change and conflict?

(National funds, humanitarian funds, climate funds, remittances, private sector, insurances)

Appendix 2: List of Key Informants-Turkana County

	Name	Designation	Organization
1	Chris Ajele	Director-Livestock	Livestock
2	Sammy Ekal	Project Manager	TUPADO
3	Michael Ameripus	Peace Coordinator	TUPADO
4	Clement Nadio/ Pauline Pusiye	Dir Env and Natural Resources	Environment Ministry
5	Elizabeth Nyagoha	Natural Resource Mgt officer	World Vision
6	Kennedy Birgen	Planning Officer	Planning
7	Francis Elmi	Coordinator-Turkana	County Livestock marketing Council
8	Chris Aletea Imana	County Deputy Secretary	County Government
9	Johnstone Moru	Advisor climate change projects	GIZ
10	Francis Muinda	Station officer	Meteorological dept
11	James Kipkan		TRP
12	Benedict Mukoo	Director -Disaster Management	TCG
13	Fr. John Webosta	Director	Diocese of Lodwar (Catholic)
14	Lt.Col. Edward Lojore	Directorate for Peace Building and Conflict Management	County Govt
15	Peter Elimi	Project officer	Oxfam GB
16	Rukia	Coordinator -Disaster Management	Kenya Red Cross
17	Hellen Kwendo	Resource /Health	International Rescue Committee
18	Diana Ogero	Project Officer-	Practical Action
19	Augustine Lambert	Project Assistant	International Organisation for Migration
20	Julius Taigong	County Drought Coordinator	National Drought Management Authority
21	John Webootsa	Program Coordinator	Caritas Lodwar

Appendix 3: List of participates for FGDs- Turkana

	Name	Sub County
1	Rael Elibach	Loima (Namoruputh)
2	Sylvia Ayanae	Turkana West (Kakuma)
3	Jane Ameri	Turkana East (Lokori)
4	Joseph Nabwel	Loima (Lomil)
5	Abraham Lokuwom	Loima (Lorugun)
6	Benjamin Ebenyo	Turkana South (Lokichar)
7	Philip Lobehi	Turkana Central(Kathatho)
8	Philip Lowoto	Turkana North (Kaenis)
9	Kamate Longo'r	Turkana North (Kaenis)
10	Osman Eleman	Turkana North (Koriro)
11	Samson Ekidor	Turkana Central (Kalokol)
12	Abraham Kone	Turkana East (Kapedo)
13	John Ewoton	Turkana Central(Kanamkeme)
14	Esther Egiron	Turkana Central (Kailusega)
15	Mary Ebenyo	Turkana Central (Kanamkeme)
16	Lochoi Joseph	Turkana South (Lokichar)
17	Charles Lorogoi	Turkana South (Nakwameka)
18	Peter N. Adir	Loima

Appendix 4: List of key information-Samburu County

	Name	Designation	Organisation
1	Mary Bett	Depty Director of Agriculture	Agriculture
2	Mr. Chacha	Sub-County Agric Officer	Agriculture
3	Mr. Mbugua	Deputy Director-Irrigation	Agriculture
4	Rop/Leah	Director-Livestock	Livestock
5	Alex Leseketeti	County Drought Coordinator	NDMA
6	Mr. Mencha	Enforcement Officer	KFS
7	Mr. Kimani	County- Director	ASDSP
8	Molu Tepo	Project manager	Cordaid
9	Alison Lesootia	Area Officer	Acted
10	Ben Lengalen	Dir Env and Natural Resources	Environment Ministry
11	Delo Lekarsia	Natural Resource Mgt officer	World Vision
12	Dr. kimani Waithaka	County Coordinator	ASDP
13	Moses Omondi	Planning Officer	Planning
14	Dr Nyakundi	Sub-County Commissioner	National Govt
16	Peter Lesoni/	Justice & Peace Coordinator	Catholic Diocese (Caritas)
17	Evans Onyiego	Director	Catholic Diocese (Caritas)

Appendix 5: List of participants for FGDs- Samburu County

	Name	Sub County
1	Joseph Letuya	Samburu Central (Logorate)
2	Ruth Lentirangoi	Samburu Central (Logorate)
3	Resuka Lenonkipa	Samburu Central (Logorate)
4	Matingo Lenonkipa	Samburu Central (Logewah)
5	Henry Lekamparisa	Samburu Central (Logewah)
6	Emmanuel Mgimero	Samburu Central (Lolmolok)
7	Moses Ebongon	Samburu North (Baragoi)
8	Lonyil Loriu	Samburu North (Marti)
9	Achuka Luchuch	Samburu North (Baragoi)
10	Akai Kaiyabwang	Samburu North (Baragoi)
11	Lesiapadei Andrew	Samburu East (Archer's Post)
12	Sylvana Leitore	Samburu East (Archer's Post)
13	Lentaaya Sally Sotiya	Samburu East (Wamba)
14	Richard Turosi Lesesiit	Samburu East (Wamba)
15	John Saruni	Samburu East (Wamba)
16	Bernard Leitore	Samburu East (Wamba)
17	Lolpuske Samwel	Samburu East (Sereolipi)
18	Lelenguiyah Haron	Samburu Central (Kisima)

Appendix 6: List of participants for validation workshop

	Name	Organisation
1	Mr. Francis Oremo	University of Nairobi
2	Prof. Shem Wandiga	University of Nairobi
3	Mr. Paul Gitonga	International organization for Migration
4	Dr. Christopher Oludhe	University of Nairobi
5	Ms. Dinah Ogara	University of Nairobi
6	Mr. Christopher Imana	Turkana County Government
7	Dr. Asaah Ndambi	ILRI
8	Mr. Luigi Luminari	National Drought Management Authority
9	Mr. John Jaoko	Eco-network Associate
10	Mr. Patrick Abonyo	HNDT
11	Prof. William Ogara	University of Nairobi
12	Mr. Kevin Wamola	University of Nairobi
13	Mr. Mussa Billegeya	Rosa Luxemburg Stiftung
14	Dr. Simeon Dulo	University of Nairobi
16	Mr. Maurice Ouma	Regional Pastoral Livelihood Resilience Programme
17	Mr. Abdi Elmi	Care kenya
18	Ms. Thuy Kindler	GIZ CPS
19	Evans Onyiego	Caritas Maralal
20	Mr. Robin Mbae	Ministry of Agriculture-Climate Change Unit
21	Catherine Mueni	ACT
22	Vollan Ochieng	AMADPOC
23	Kittivo Mike	Caritas
24	Evans Kituyi	University of Nairobi
25	Victor Okongo	Eco-Network Associates
26	Prof. Dan Olago	University of Nairobi
27	Jacob Olonde	University of Nairobi
28	Thomas Musandu	Ministry of Environment &

		Natural Resources
29	Jane Gakure	Regional Pastoral Livelihood Resilience Programme
30	Mr. James Kaoga	University of Nairobi
31	Ms. Agnes Ngala	Kenyatta University
32	Prof. Caleb Mireri	Kenyatta University
33	Winnie Codawa	University of Nairobi

Appendix 7: List of some of the local organizations having peace initiatives component

S/N0	Organization	Roles
1	NDMA	NDMA is an agency of the Government of Kenya mandated to establish mechanisms which ensure that drought does not result in emergencies and that the impacts of climate change are sufficiently mitigated. Share information, support resilience projects, emergency response activities
	Turkana County Government	Fronting peace through negotiations across the borders, within communities and providing support structures for livelihoods in Turkana.
	IOM	
	KRCS	Provide relief and livelihood support and emergency responses, empowerment programs
	Practical Action	Reducing poverty through technology. Practical Action works with communities to find practical solutions to poverty. Energy access, food and agriculture, urban waste and water, disaster risk reduction
	LOKADO- Lotus Kenya Action for Development organization (LOKADO)	Operates in the Oropoi and Kakuma divisions in the semi-arid parts of north western Kenya bordering Uganda. It addresses the area's problems, including cross-border conflict and acute poverty and illiteracy. It aims to help promote socio-economic justice and inter-community tolerance, to generate meaningful development
	FCA-Finnish Church Aid	The FCA plays an important role in the peace-building work in North Kenya. It has negotiated with both tribes in advance and cleared the way for the peace talks. It also cooperates with influential bishops in the area who play a key role in achieving peace.

	UNDP	monitoring and documenting conflicts (sometime this is challenged considering that what the government reports differs with them); peace dividend grants
	Mercy corps	capacity building on negotiation skills