



Abstract.

The relationship between climate change and conflict is a complex one. Violent conflicts involving pastoralists have become widespread and increasingly severe in the North Rift and North Eastern regions of Kenya. This study examines the factors contributing to such conflicts, and discusses issues and priorities for conflict prevention and peace building. The pastoralists in the three districts under study are largely nomadic. They live primarily in arid or semi-arid areas and depend on livestock (cattle, sheep, goats and camels) for their livelihood. They rely on access to pasture and water, for the survival of their livestock. Such resources are scarce and under increasing pressure. Conflicts involving pastoralists associated with resource competition, cattle rustling and wide availability of small arms are widespread and of increasing concern. This Study thus provides a useful case to examine in depth factors contributing to conflict, issues and priorities for conflict prevention. This study also looks at how the livelihoods of pastoralists in Samburu, Pokot and Turkana is vulnerable to climate change and conflict and ways in which these systems adapt to these conditions. The last part of this work looks briefly at how climate change and conflicts affect human security. Conflicts interfere with human rights like the right to life, the rights to adequate housing, the right to health and the right to food. It discusses briefly how these rights are directly affected when a society is hit by climatic changes like droughts or floods. The study uses interviews, semi-structured and focus group interviews to gather data from local communities, government officials and experts. It also uses secondary data from published and unpublished sources and systematically analyzes this material using qualitative analysis. The result shows that climate change is evident in the three districts in Northern Kenya. There's evidence of decreasing precipitation and increasing temperatures. Drought and unpredictable rainfall have impacted greatly on the people's livelihoods and this has resulted to migration, overpopulation and resource conflicts. The vulnerability of pastoralism to climate change and conflict is further worsened by the fact that this way of life is greatly marginalized. They receive no support from the government and this just worsens the situation. Some of the coping strategies that have been applied are mobility, trading, crop farming is slowly being introduced, and drought resistant livestock like camels and goats are slowly being kept. This paper suggests ways to reduce vulnerability thus ensuring that people's rights are not violated.

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Acronyms

ACCORD- The African Centre for the Constructive Resolution of Disputes.

ASAL- Arid and Semi-Arid Lands.

CDC-The Conservation Development Centre.

CEWARN-Conflict Early Warning Network.

CRC - Convention on the Rights of the Child.

GoK- Government of Kenya.

IACHR - Inter-American Commission on Human Rights.

ICRC - International Convention on the Rights of the Child.

ICCPR - International Covenant on Civil and Political Rights.

ICESCR - International Covenant on Economic, Social and Cultural Rights.

IGAD-Intergovernmental Authority on Development.

IISD-The International Institute for Sustainable Development.

HIV- Human Immunodeficiency Virus.

IPCC- Intergovernmental Panel on Climate Change.

KPPG-Kenya Pastoral Parliamentary Group.

OHCHR - Office of the High Commissioner for Human Rights.

PASC-Pastoral Standing Affairs Committee.

PPG-Pastoral Parliamentary Groups.

SAWL-Small Arms and Light Weapons.

UNDP- United Nations Development Programme.

UNFCCC - United Nations Framework Convention on Climate Change.

WFP-World Food Programme.

WMS- Welfare Monitoring Survey

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1. Introduction

1.1 Objective of study

My main objective of this study is to establish the vulnerability of different groups of people of northern Kenya to climate change and conflict. I also intend to find out whether there are known human rights violations during conflict and how these violations have an impact on peoples' wellbeing.

Northern Kenya has been affected by conflict over the past few years. I would like to find out to what magnitude these conflicts are a result of the changing climatic conditions, not ignoring other factors.

Whether conflicts are a result of the changing climate or not, these two factors affect people negatively, I would like to indicate how people's livelihoods have been affected by these two factors. Due to conflict and constant climatic changes, the people's ability to access food, water and medical care is affected.

This paper represents an attempt to understand the relationship between environmental and climatic factors and conflict dynamics in Northern Kenya. This paper shows that climate change and conflict may have a link in that droughts may intensify the competition for scarce water and pasture and the degradation of natural resources and in worst cases can cause violent conflicts. The analysis of rainfall and conflict data in northern Kenya shows that there is no clear and predictive pattern between the occurrence of drought and conflict. Conflicts among pastoral communities have broken out during the dry season but the latest data indicate that conflicts broke out during the rainy seasons as well. Local communities say that there is evidence of climatic changes. Pastoral communities have over the years developed customary institutions that help them pool resources across space and time in order to survive in their environment. This paper will discuss why even in the presence of these institutions, conflicts still arise.

The second part of this paper will focus on how local communities experience climate change as a daily threat to human security.

1.2. Specific Research Questions

- What are the major climatic changes experienced in Northern Kenya.
- Are there any links between these climatic changes and the occurrence of conflict in Northern Kenya?
- Why are pastoralists the most vulnerable group to both climatic changes and conflict in the area?
- What are the coping strategies involved by pastoralists?
- How does both drought and conflict impact on Human Rights?

1.3. Background

1.3.1 Climate Change affecting Kenya

Kenya experienced the worst drought in 2009 that affected so many people, the worst affected were those who live in arid areas and northern Kenya. Thousands of livestock were lost, people died and many had to migrate from their home areas to new areas. The horn of Africa in general is a good case study for resource related conflicts. The areas in these region have been known to for a long time have a history of communal violence both between and across borders. Most of these conflicts occur in the regions arid and semi-arid zones. (Mkutu 2008).

The horn of Africa and Northern Kenya in specific is home for many pastoralists, agro-pastoralists, private ranches, national parks and various investments and development projects. Peaceful coexistence is therefore important for these various actors as they have to share the resources available for them, and due to the ever changing climate peaceful coexistence becomes even of greater importance.

Although conflict has always been part and parcel of these people's lives, its intensity, increasing occurrence and its destructiveness has become of a huge concern for many.(Mkutu 2008).Because of this it has become important to review and possibly understand the relationship between environmental degradation and conflict in light of the predicted effects

of climate change for the region and on environmental degradation.(Mkutu,2001).Social anthropologists were the first to give an account of pastoral conflicts, and in their work they had paid more emphasis on its cultural meaning and what it symbolized for the competing groups(Hendrikson et al. 1996).Violence and conflict was initially presented as a way of life for the pastoralist communities, other factors that led to conflict were increasingly ignored and pastoral culture was used to make this violence normal and it's this that made clan politics(Edgerton 1972).But the normalization of pastoral violence has been challenged by pastoral activists, range ecologists and some anthropologists who have refused to believe in the idea of belligerent herdsmen (Bolig 1990) ,they believe that this was one of the negative stereotypes of pastoralists that have roots in the colonial times (Hagmann and Mulugeta 2008).

Pastoralist is the main occupation for the people of Turkana, Samburu, Pokot and Marsabit. Some practice crop farming but this has reduced over the years due to the severe droughts and decreasing rainfall.

Climate change disasters and conflict have serious impacts on the people; conflicts lead to death, displacement and mostly lead to an infringement of people's rights. This paper also explores or investigates how people's rights are affected by arising conflicts plus the existing climatic changes

Climate change-induced conflict is among the major global threat to human security and the environment. It has been predicted that there is going to be an increase in climatic changes in northern Kenya and this will mainly result in increased droughts and floods.

Climate change and its impacts will be felt differently among different ages, regions, income groups, occupation and gender. Those that live in poverty will be the most vulnerable to environmental changes.

In relation to the above, this paper will discuss the links between climate change and conflict, it will also discuss pastoralism and why and how this occupation is affected the most by climate change and conflict and then finally this paper will discuss human rights and how pastoralist groups suffer as a consequence of the re-emerging conflicts in their area.

Poor people around the world have been and are still coping with the impacts of global warming .From increasing droughts to increasing floods, from lower agricultural productivity

to more frequent and severe storms, many rightly fear that things will only get worse. Their human rights – to security, health, and sustainable livelihoods – are increasingly being threatened by changes to the earth's climate.

Looked at from an ethical point of view the poorest contribute the least to the problem but the irony is that they suffer the most from climate related impacts .Ninety-seven per cent of deaths related to natural disasters already take place in developing countries. In South Asia, the 17 million people living on sandbanks in the river basins of Bangladesh could be homeless by 2030 as increasing Himalayan melt water floods their homes. In Niger, changing rainfall patterns are contributing to increased desertification, which, for the Tuareg and Wodaabe people, has caused massive losses of livestock and food insecurity. In South America, a loss of snow in the Andes in the next 15 to 20 years will pose a serious risk to the more than nine million people living in Lima, Peru's largest city. (Oxfam 2010).

Those who are already poor and vulnerable are and will continue to be disproportionately affected. Agricultural land will become too dry to till, crops will wither, rising sea levels will undermine coastal dwellings and spoil freshwater, livelihoods will vanish.

Carbon emissions from industrialised countries have human and environmental consequences. As a result, global warming has already begun to affect the fulfillment of human rights, and to the extent that polluting greenhouse gases continue to be released by large industrial countries, the basic human rights of millions of the world's poor to life, security, food, health and shelter will continue to be violated.

1.3.2 Violence and Natural resource disputes in Kenya

Kenya experienced violence in following the December elections. Even though Kenya has been a peaceful country compared to a few other African countries, the magnitude of the violence showed how the country is divided along ethnic lines. It also showed the present limitations of Kenya's security forces and the role of organised militia in politics. It has been suggested that politics in Kenya is characterised by an ethnicised struggle for control of the state and resources that come with it.

Based on research that has been done by Saferworld, there are two primary causes of conflict in Kenya. One is the national structures and policies that govern the way natural resources are allocated between different regions and between different tribal groups and this is seen to cause some mistrust and animosity among different communities. Another primary cause of conflict is the competition for the access of resources which is differentiated by tribe and ethnicity. Land is an important resource as this underpins the economy and the livelihoods of many people in the country. Over the last few years, the past grievances that people had on the issue of distribution of land between different ethnic groups has now become greatly politicized. Some of the conflicts arise due to poor land administration and weak land policies. The increasing levels of unemployment among the youth gives them opportunity to join armed groups. Northern Kenya is the most marginalised and the most underdeveloped region in Kenya. This region lacks in basic service provision and receives a smaller portion of national resources compared to the other regions. Northern Kenya is isolated in terms of its topography and poor infrastructure. There is ineffective security provision, the roads in the area are considered unsafe due to threats by armed bandits.

As mentioned before, the region is mostly arid with low rainfall and high temperatures throughout the year. The control of livelihood resource such as land is mostly insecure. The dominant livelihood strategy in this region is pastoralism, a system of production that entails mobility of livestock which is characterized by communal management of natural resources. Over the years, pastoral communities have been marginalized from accessing economic and political resources, this is mainly due to that they are settled in very remote areas and so ineffective state institutions. Pastoralists are also largely under-represented in the government. The pastoral lifestyle is often associated with violent conflict. Disagreements and disputes arise due to issues related to access to water and pastures. The communities in pastoral areas are often involved in cattle raiding. Such violence has claimed many lives. (Bond 2007).

Access to pastures and water leads to conflict between pastoralists and other settled farmers. When pastoralists move their cattle into private areas such as wildlife reserves or cattle ranches, tension kicks in. When many pastoralists converge in one single area seeking to graze, they mostly end up competing for the reduced pastures.

There are water conflicts often between pastoralists and settled farmers when access is blocked by fences, when crops are damaged by animals or when water resources become

depleted due to overuse. Clashes over water access or control of water points occur between pastoral groups.

The above mentioned disputes are called resource disputes. Scarcity arises when the supply of the same commodity cannot meet up with the demand of the same. Decreased demand maybe due to the expansion of privately owned land, environmental degradation or climate change. The link between natural resource scarcity and conflict is not a clear one. However how the scarce natural resources are managed is the key determining factor. Access to both pasture and water can often be peacefully mediated between communities, through the agency of traditional institutions and mechanisms that have historically served this purpose, such as reciprocal grazing rights. (Hagman T & Ludi E 2004).

The prevalent form of violent conflict among pastoralists groups is cattle raiding, this is mostly linked to resource scarcity, it can also be linked to pastoralist identities and cultural practises. These relate to the traditional role of the moran or young warriors whose participation in cattle raiding represents a transition from youth to manhood.

Cattle raiding in Northern Kenya has been made worse by the proliferation of small arms and light weapons (SALW). Small arms and light weapons are usually given as payment for stolen cattle and are regarded as very prestigious by young men. The availability of these arms makes the conflict more intense, as one group increases its arms the opposing group does the same so as to outmatch the other. The availability of these arms has led to a shift from just disputes to violent conflict. The Conflict Early Warning Network (CEWARN) estimates that from 1996 to 2002 about 300,000 cattle were rustled on the Kenyan side of the Sudan-Kenya-Somalia triangle killing 1,200 people. (ICGLR 2006).

The Government's standard response to the problem of SALW proliferation in Northern Kenya has been to launch coercive disarmament operations. This has not been very successful.

In 2009 July an incident occurred in Isiolo. The access to water between Samburu, Turkana and Borana and Somalia groups was not resolved peacefully. The resulting conflict led to the death of about 32 people plus displacement of thousands and extensive livestock theft. The Government supplied around 300 guns to Isiolo residents through the Kenya Police Reserve (KPR). The introduction of arms clearly led to a greater division between communities. Among the reasons for doing this was for political popularity as the 2012 general elections were drawing closer. The original reason for conflict was natural resource scarcity. It escalated into

displacement of many people thus more pressure on limited resources resulting in a major humanitarian crisis.(Omollo 2010).

The above case shows natural resource scarcity and competition and also demonstrates the complexity of conflict causes and its dynamics in Northern Kenya. Scarce resources contribute to violent conflict, making the area insecure, leading to displacement into more secure areas where limited resources are put into more stress thus potentially leading to more and more resource –based violence.

The relationship between climate change and conflict is a complex one. However, it can be looked at from a resource perspective, as population increases, resources might begin to decrease leading to competition and the end result being survival for the fittest. The decrease in resources does not in itself qualify to lead to conflict but where the resources are not well managed then conflict becomes inevitable.

Violent conflicts involving pastoralists have become widespread and increasingly severe in the North Rift and North Eastern regions of Kenya. This study identifies and examines the factors contributing to such conflicts, and discusses issues and priorities for conflict prevention and peace building.

The pastoralists in the three districts under study are largely nomadic. They live primarily in arid or semi-arid areas and depend on livestock (cattle, sheep, goats and camels) for their livelihood. They rely on access to pasture and water, for the survival of their livestock. Such resources are scarce and under increasing pressure. They must be shared amongst the pastoralist's communities.

Conflicts involving pastoralists associated with resource competition, cattle rustling and wide availability of small arms are widespread and of increasing concern. This Study thus provides a useful case to examine in depth factors contributing to conflict, issues and priorities for conflict prevention.

2. Data collection and analysis

2.1 Research strategy

Since the emphasis of this research is to undergo an intensive examination of the subject on climate change and conflict vulnerability and the issue of human rights, a case study is used (Bryman 2008). In case study research, an exploratory questions of ,''what'' and ''how'' and inductive research is most appropriate and helps to harness detailed and valuable insights and understanding of the topics which could not be achieved by a survey (A.Rialp & J.Rialp 2006; Yin 2003). My case study strategy is qualitative research.

Methodological triangulation is used and it involves obtaining data from different sources such as observations, documentations and interviews. This is mainly important as it helps to harness diverse ideas about the same issue and assists in cross checking the results. It helps to increase the validity, reliability of the findings and eases data analysis. (Bryman 2008; A.Rialp & J.Rialp 2006).

This study obtains data from primary sources (field observation, interviews with households, Government officials and local administration) and secondary data sources such as government documents, meteorological data, data on animals lost during conflict, human lives lost during conflict etc.) were also used.

2.2 Collection of primary data

2.2.1 Focus group interviews

Qualitative data was collected at household and village level and district level from 25 September 2012 to 30 November 2012. Primary data was collected using an interview guide and focus group interviews with both closed and open ended questions. My focus group interviews were administered at the commissioner's office in Turkana, Samburu and west Pokot, other focus group interviews were conducted in selected places in each district. In Turkana, focus group interviews were conducted in three different primary schools. In Samburu, only one focus group interview was conducted at a chief's office and caution had to be taken due to the fact that this area was not safe at the time. One last focus group was

conducted at the border of Samburu in Pokot district in a primary school, due to safety issues in both Samburu and Pokot I got help from the local leaders and so I issued self-filled questionnaires in two villages in Pokot District. In all the focus group interviews, I started with interviewing the village elders and then also including both the women and the youths. The interviews with this group was targeted at being introduced to the village, what activities are carried out by the village, how they make their living and a general overview of the number of people, age, and sex and how the people are spread out in the three villages that were picked out randomly to represent the whole district.

Most of the people that attended my focus group meetings did not possess any kind of formal education so I simplified the questions for them. Some of the questions that I thought would be well answered in the focus group interviews was whether the villagers thought there were links between climate change and conflict. 60% of the respondents were of the view that they were more peaceful during the rainy season. As they had enough pasture and water for the animals.

2.2.2 Semi structured Interviews

Primary data on conflict trends, climate change and vulnerability was collected by using household interviews from September to November 2012. The total number of household interviews that was carried out in the three different villages was approximately 90. 30 households were randomly picked in one village in every district. This random selection was guided by village records provided by the village elder in every village and by using this it was easy to know the size and composition of the randomly picked households and also know whether they had relocated from the village and in that case another randomly picked household was chosen to close the gap.

The household interviews targeted answers from both men and women of different ages, and each interview was done in almost half an hour each. I had many questions to ask but most important is whether they had experienced climate change disasters and if yes, how this affected them, and if they had experienced any conflicts and how this affected their livelihoods.

To enhance the chance of meeting the households in their village, early morning and late afternoon was found to be the most appropriate time. In cases where the households happened to be away from home, a new household was randomly found in the same village.

Semi structured interviews was also found to be an appropriate strategy for the study because *Questions that were not included in the interview guide were asked and new questions were raised as ideas emerge through the process.* (Bryman 2008:98). The interview questions focus on a more comprehensive range of issues including socioeconomic status (land size, Livestock number, literacy, gender and age), climate change trends, climate change impact on livelihood and human security, coping mechanisms, conflict trends, causes of conflict etc.

The households represented in the study encompass age groups 18 and above, which represents *the idea of all age households* (Bryman 2008). The groups interviewed comprised of illiterates, primary school dropouts, high school and graduates. The groups put in percentage are 45%, 34%, 11% and 10% respectively.

The ratio of males to females interviewed was 7:3 respectively. The lower female number is attributed to society's tradition and male dominance. It is the males who were responsible for introducing the family to a stranger and I was more welcome if the man invited me in. Some of the women refused to be interviewed saying that it was the husbands responsibility to speak on behalf of the family.

The languages spoken in the three villages were Samburu, Pokot and Turkana, some could speak Swahili and just a few could speak English. The interviews took place face to face and a sound recorder was used in order to minimize information loss. In cases of lack of consent from the interviewees to be recorded, *'Interview protocol ,a form....with questions and blank space between the questions was left to allow them fill in their answers.* (Creswell 1998). In all my interviews all my interviewees were treated as 'carriers of information' and I acted as an 'ignorant knower'. Each interview took an average of 25 to 40 minutes.

In Pokot District especially, some of the interviewees refused to be interviewed due to political reasons. This happened due to the inability of the interviewees to read the letter of cooperation written to them. It was challenging to ask questions such as names, assets,

children and their ages .I decided to move these questions to the end of my questionnaire and also tried to convince them that y research was neutral from all forms of politics.

2.2.3 Interviews with Government Officials

When I arrived in each village, I made a visit to the chief's office to introduce myself and get his permission to interview his people. In all the three villages, the village chiefs called for a meeting between me and other village representatives and the main reason for this is to know my intentions. I also made a visit to the weather forecast office in Turkana to request for data on climate change trends over the years. I got the same data as collected initially from the Kenya Meteorological Department in Nairobi.

2.3 Ethical issues

The aim was to interview both men and women of different age groups. The distribution of age and sex of the respondents was affected by the households chosen and who were at home, since the interviews were conducted without previous notice. In Turkana District, I got a translator as most of the people did not speak neither English nor Swahili. However, not all respondents answered all the questions, mainly due to the time aspect – to avoid bothering the respondents too much in their daily work I did not want for the interviews to last more than approximately half an hour. The exact numbers of male and female respondents is difficult to account for, since some interviews were performed with groups consisting of both men and women, but approximately 60 percent of the respondents were men.

The interviews, which consisted of questions related to climate change and conflict were done both sitting down and walking around the homes. I made sure to explain to our interviewees the purpose of my visit and whenever I needed to make recordings I also asked for their consent. Among some of the challenges encountered were time constraints. I initially wanted to do more household interviews in each village, but the village households being scattered it was difficult to reach all the randomly picked households as I had a lot of other villages to interview. Most of the households also practice farming and are pastoralists and they were in the field mostly in the day and their houses were closed. Some of the households picked did

not want to take part at all in the whole process as they thought I was there for other reasons. They said they did not want to endanger themselves and their families.

2.4 Study area

Kenya is a country located in the Eastern part of Africa and just like many other African countries, the country relies on natural resources and agriculture economically. My research was carried out in the Northern parts of Kenya that has been experiencing different kinds of conflict. The same area has experienced increased drought over the years. This area has been the center of attention and up to date there has not been any established working solution to the problem. Many scientists have projected that there is going to be an increase in climate change that will result in more droughts and floods in northern Kenya.

Turkana is situated in north-western Kenya. Turkana was initially one district but it was divided into three districts in 2007, forming Turkana Central district, Turkana North district and Turkana South district. The districts form part of the 43 districts in the Rift Valley Province (GoK 2008:19). Turkana covers a total area of 77 000 km². The population size in the year 2002 was 497 779 (GoK 2002:8). Turkana's temperature ranges between 24 and 38°C, and the mean temperature is 30°C. The driest months are January, February and September. The area usually experience longer rains (which are usually erratic and unreliable, however) Between April and July, while short rains are experienced between October and November. The rainfall ranges as established in 2002 indicated arrange between 300 and 400 mm per annum, with the lowest rainfall being 120 mm, this has however decreased over the years. According to the Welfare Monitoring Survey (WMS 1994, cited in GoK 2002:4 and 8), the overall poverty in Turkana was 74% and food poverty 81%. Turkana Central, Turkana North and Turkana South are some of the poorest districts in Kenya. The overall poverty, also known as absolute poverty, in Kenya was 46% in 2005 (GoK 2005a:13).

Pokot district on the other hand is divided into two, West and East. The Pokot people of Kenya inhabit the West Pokot County and Baringo County. The pokot people speak Pokot, a Nilotic language that is related to the Nandi, Tugen and Marakwet groups among other Nilotic tribes. In 2009 Kenya's census indicated that there are approximately 620,000 Pokot speakers in Kenya. Pokot district has almost the same rainfall and temperature pattern as Turkana with

a mean temperature of approximately 30°C (GoK 2005). According to the data collected, there is only one rainy season in this area and that is between April and June, the rest of the months are dry. January being the driest month. Pastoralism is largely practised in this area and almost no crop cultivation at all.

For many years, the Turkana and the Pokot have organized cattle raids against each other. Conflicts have been sparked in the past by cattle theft. These two communities have therefore been in war and peace with each other from season to season.

Samburu district is a neighbouring district to both Pokot and Turkana, the Samburu people are semi nomadic pastoralists and herd mainly cattle. They also keep goats, sheep and camels. The people of Samburu mainly speak Samburu language, a Nilotic language. Samburu district is located to the North of the equator and covers an area of approximately 21,000 square kilometres. This area, though very dry is both diverse and of great beauty. The area consists of small forest areas, high altitude areas, open plains and deserts. The main highland is about 1,600-2,400 metres above sea level. The lowlands are hot and dry and covered by acacia scrub which is the primary vegetation (Orindi 2007). Traditionally the Samburu depended on pastoralism to make a living. They still do practise pastoralism and survive on cows and cow products, goats and goat products but this area has seen a great increase in population over the years that has been followed by changes in livelihood strategies. Some families have attempted to grow crops, which has been somewhat successful and the majority young men have resorted to migration to neighbouring cities to look for waged work, other have resorted to selling spears and beaded ornaments to tourists.

Figure one

A map indicating the arid and semi-arid Lands in Kenya (ASAL)



Source (<http://samburuomba4kenya.blogspot.no/>) checked on the 15, May 2013 at 13.50).

3. Results and analysis

3.1 An overview of the general factors contributing to violent conflict in Turkana, Samburu and Pokot districts

The patterns of conflict in the North Rift and North Eastern regions are complex. There are many factors contributing to the risk of violent conflict involving pastoralists, and these have tended to become mutually reinforcing. Some conflicts within and between pastoralist communities, such as raiding and cattle rustling have a long history and have to some extent become an aspect of traditional pastoralist culture. However, such 'traditional' conflicts have become increasingly destructive and less manageable. The major causes of conflict among the pastoralist include but not limited to intensified cattle rustling, proliferation of illicit arms, inadequate policing and state security arrangements, diminishing role of traditional governance systems, competition over control and access to natural resources such as pasture and water, land issues, political incitements, ethnocentrism, increasing levels of poverty and idleness amongst the youth.

3.1.1 Impacts of violent conflict

Violent conflicts have had very negative and severe impacts on the communities that are involved in these conflicts. The study highlighted several consequences of violent conflicts, which are negatively affecting the communities under focus. Loss of human life, property, displacements of large segments of the communities, disruption of socio-economic activities and livelihoods, increased hatred between communities, environmental degradation and threat to water catchments areas, increased economic hardships as a result of loss of livelihoods, high levels of starvation and malnutrition among the displaced groups and unprecedented dependency syndrome on relief food are the main negative impacts of the increasing and severe inter-ethnic armed conflicts in northern Kenya.

3.2 Specific findings in Turkana district

Three focus group interviews were carried out in Baragoi division. Turkana district lies in the north and is dry and the people here keep cows, goats and some have lately started keeping camels.

The main food eaten by the people in Turkana district is meat and blood. Some people grow crops but this has gone down over the years. The women noted that they no longer have enough cows to slaughter and therefore now feed their families with boiled maize, porridge and ugali. Some women said they plant beans and have to trade these with other villagers for maize. This is due to the need to have a balanced diet.

3.2.1 Climatic changes

The months of March and April and May are the months of harvest since they usually have had some rain and have planted short term crops during these months. The people do not need to move so far away in search of pasture as they have enough pasture for their cows to graze on. The rest of the year is mostly dry and the people go sometimes for days without food. It was initially easy to predict and prepare for the dry seasons but now seasons change so quickly and they get short term rains when they least expect it. The droughts are longer than they used to be before.

3.2.2 Nature of conflict

In this district what was very distinct is the fact that all the respondents interviewed thought that most of the conflicts were related to resources. 80 % of the respondents were of the view that cattle rustling and raiding was the major kind of conflict that affects people in that area. It's also important to note that due to the fact that this district is close to the northern borders of Somalia and Sudan it's been vulnerable to cross border conflicts as well.

3.2.3 The causes of conflict

Three focus group interviews were conducted and this was a group of women, village leaders and a group of youths mostly below the ages of 30. The youths thought that the availability of firearms is to blame for the increasing instances of cattle rustling. Many of the respondents felt that the need for the people to enrich themselves was one of the other reasons leading to conflict. The women mentioned that dowry and poverty is a reason why people go on raids, those that cannot afford dowry go the extent of raiding so as to be able to get married.

3.2.4 The impacts of conflict

It has mostly lead to displacement and forced migration, people are forced to look for areas to settle in. It has also increased instances of poverty. With the rich getting richer and the poor getting poorer. It has led to death. The use of guns during raids had led to many being wounded and due to the fact that there's poor infrastructure and few hospitals it's hard to save the lives of the wounded. Loss of lives is inevitable. This is a breach of the right to life.

Children have to stop going to school during the raids. Most never return back to school, young girls drop out and get married to old men instead. Moving to new places has also in the past lead to increased instances of disease. Young people moving into small towns in Turkana and exposing themselves to sexually transmitted diseases like HIV and diseases like tuberculosis. Magdalena, one of the ladies I interviewed gave me a very sad incidence of how her daughter had been forced to move to town and due to the pressures to provide for her family she engaged in prostitution, acquired HIV and is now sick and needs medical attention which her family cannot provide.

3.2.5 Cattle lost during attacks

In my focus group interviews, I asked every representative of every family if they had lost any livestock and in every group of ten people, there had been a loss of more than 100 cows in one month. In Kakuma only the village elders indicated that they had lost around 40,000 cows in one year.

They also explained that they sometimes are able to track their livestock back after dialogue and intervention but they do not get all that they have lost. The respondents also told me that they usually revenge and steal livestock from other communities that is why it's not easy for them to know how much they lose exactly in one year.

3.2.6 Loss of lives

Leader representatives from Lokichogio and Kakuma indicated that in 2012 they had had reported deaths that amounted to around 60 people and most of those that had died were women and children and the old people. In Kakuma, the total number that had been reported in 2012 was around 50 deaths and most of them being also children and women.

3.2.7 Coping mechanisms to drought and conflict

The people of Turkana are mostly pastoralists and one of their important coping mechanism is raiding to replace lost livestock, they cope by moving from one place to another in search for water and pasture. They had also recently started to keep camels and goats. Which do well even in extreme dry conditions.

The female respondents indicated that they have resorted to constructing boreholes to enable them have enough water during the dry season, They also mentioned that they grow drought resistant crops like cassava, millet and sorghum and that they have turned to trading with neighboring districts during the dry season. The youths mentioned that most of them have resorted to leaving the village and moving to the city to find work and income.

3.3 Specific findings in Samburu District

3.3.1 Nature and causes of conflict

Cattle rustling and night attacks are the main causes of conflict here. The village elders and women felt that the need to revenge for cows stolen was the major reason they were in conflict with their neighbours. Another majority said that competition for scarce resources is a cause of conflict. Politics and poverty and the drying of Lake Turkana makes them desperate and with little water for their cows and daily use.

The youths said that they were the ones responsible for the raids and that they were proud of that. Winning for them meant that they get praises and gifts and also they get to marry the most beautiful girl in the village after a successful raid. Those who feared to raid are despised.

3.3.2 Impacts of conflict

Loss of livestock cattle during the raids is inevitable. They mentioned however that the raiders do not steal camels and goats. They have been reduced to poverty and women and children plus the old people have suffered a great deal due to these conflicts.

These conflicts have led to loss of lives. Their normal lives are disrupted, their trade is also disrupted, and their children have had to stop going to school as a result. The leaders said that some tourists have been injured as a result which is a bad thing for the whole country.

Children who have lost their parents have resorted to becoming street kids as there is no one to care for them. Prostitution and cases of sexually transmitted diseases have increased due to this.

The main consequence of the conflict is disruption of family life; people have to move to new areas. There were many temporary camps in Baragoi shopping centre of people who have lost their homes due to conflict. Talking to these internal refugees, the majority mentioned that they were there due to the increasing drought and because of conflict. The constant migration has led to the clearing the few remaining forests thus increasing drought. Crop farming has been abandoned due to conflict as well. The women mentioned that their staple food has since changed from milk, blood and meat to maize, beans, wild fruits, and vegetables.

3.3.3 Coping mechanisms

Returning raided animals to their neighbors is done for the sake of peace. And that since poverty has increased over the years due to scarcity of resources, the village elders have had to reduce the number of cattle needed for dowry so the youths do not have a reason to go on a raid.

Local security in Baragoi division had been put in place to maintain peace and order. Those households that were not affected much by conflict have opted to planting drought resistant crops as a coping mechanism to drought. The government of Kenya has also tried to resettle displaced people. Boarding schools have been started to make sure that children do not have to drop out of school. Those who have been reduced to poverty have been introduced to other means of making a living like bee keeping which 10 households said that it was a good project and that they were making some income from that.

3.4 Specific findings in West Pokot District

3.4.1 Staple food

The people of Pokot depend on mostly animal products such as meat milk and blood. They also plant maize and beans. The driest season in this area is between November and March and during this time the people have to collect wild fruits and vegetables for food.

3.4.2 Nature of conflict

The majority of the respondents mentioned cattle rustling as the main cause of conflict. The Pokot have been for a long time been at war with the Samburu people from Kenya and other pastoralists on the Ugandan side. They say they are constantly at war as they want to protect their land and culture.

3.4.3 Causes of conflict

The causes of conflict are many in this area. Poverty, competition over the reduced natural resources, population increase and the fight for space and land to settle, reducing amount of pastures and water for livestock. Other causes are cultural reasons and the availability of guns in the area.

3.4.4 Impact of conflict

Loss of livestock, loss of lives was mentioned to have increased over the years. The constant fighting has also increased poverty and hunger, people cannot plant crops nor do any kind of farming. Displacement and consequent fighting for space is also evident in this area.

3.5 Human Rights Situation

3.5.1 Findings Related to the Right to Water

In Turkana district villagers depend on boreholes sponsored by an aid organization, with a receding water level and water of polluted quality. The water flow of an adjacent tributary of Lake Turkana is reduced, a fact they attribute to increased droughts. Villagers report that in former times they were able to dig shallow wells by themselves and elderly people remember

that in the past water was never a problem. Now they depend on technical support, which indicates that the groundwater level has declined considerably. Also nearby ponds, where they used to fish, have dried up. They have been aware of the recession of water since the 1990s, but do not know what to do about it. They attribute droughts and lack of rain to the logging of forests that used to attract the rain, but the young in particular are also aware of scientific explanations related to carbon emissions of industries in Kenya and far abroad. In Pokot and Samburu villagers also face severe water problems. In the last 10 years there has been an introduction of both furrow and drip irrigation schemes by the government of Kenya and aid agencies, this followed the severe drought that hit northern Kenya in 2009. One of the schemes is called the Elliea irrigation scheme.

Among the reasons for these schemes was to motivate farmers to venture into horticultural production and invest in drought resistant crops like millet and sorghum. The total amount of harvest from Lotubae irrigation scheme had motivated most families to invest in agriculture, according to the District Commissioner of Turkana the government has promised to increase the area under irrigation in Elliea from 400 to 800 acres. The scheme had produced around 8,000 and 2,000 bags of maize and sorghum respectively last year. The Lotubae irrigation scheme is also to be expanded from 750 to 1200 acres, while that of Morrullem will be expanded from 1,500 to 2000 acres.

While all this seen to pave way for a better life for the people of northern Kenya. The pastoralists are not thrilled. This is because this means that they lose grazing land and also the fact that this might lead to a drop in the levels of water available for their animals. Shifting from pastoralism to crop farming is not easy as this is a way of life for them. The pastoralists feel neglected and marginalised by the government and the privatization of water rights have made them lose more livestock due to increased vulnerability to drought.

This water shortage for the pastoralists has led to disputes and armed conflicts. The pastoralists feel that the government should have also helped drill more boreholes in grazing zones for the cattle keepers. This would have created a win-win situation for both the crop farmers and them.

The governments' allocation of 60 million to these projects for just crop production is not a move that's taken very positively by the pastoralists.

A lot of water will go into these irrigation schemes while the neighbouring areas still do not have enough water for daily use.

An interview with the women indicated that there are very few wells and the women have to travel around 10 km to fetch water, sometimes the wells are dry and this exposes them to great danger. Sometimes they are raped on the way back or some attacked by rival neighbours. (Data on irrigation schemes received from the District officers' office in Turkana).

3.5.2 Findings Related to the Right to Housing and Security of Tenure

In the three districts there was evidence that the people did not have secure housing and also lacked security of tenure. Negative impacts on the right of housing and security of tenure were indicated in the three districts. Land is communally owned and those who had titles were not more than 10% of all the people interviewed.

In Turkana, some pastoral villages are settled on land registered as ranches, this does not give them any right to the land. They live there temporarily and can be evicted by the state at any time. The respondents mentioned that they had been evicted from their homes from time to time and resettlement in new areas was something not new to them.

The respondents indicated that the evictions are very ruthless sometimes. They are sometimes evicted without notice and those that carry out evictions use teargas on them. They burn their homes, property is destroyed, children are injured and some people have even lost their lives. The chief of Samburu explained that in 2012 February evictions were carried out on Friday morning at 6 o'clock and a lot of property was lost. Two local policemen were shot dead as they tried to intervene. The evictions were organised to evict the villagers from land bought by investors and local young men were recruited to carry out the evictions.

In Pokot, settlement schemes had been introduced but this does not really help due to the fact that the majority in the three districts are pastoralists. Their lifestyle makes it necessary for them to rotate from one place to another in search of pastures. Crop farmers who own large tracts of land and own titles will mostly hire people to keep the pastoralists away. Conflicts have started where the pastoralists' cattle have entered these privately owned grazing land.

3.5.3 Findings Related to the Right to Food

In all communities, availability of and access to adequate supplies of food proved to be a serious problem, which was often related to the water and tenure issues discussed above. The Turkana, the pokot and samburu were formerly hunters and gatherers who used to hunt in the forests they call the 'White Forests'. When hunting was prohibited by the Wild Life Conservation Act of 1976, they became deprived of one of their main sources of livelihood and were thus forced to adapt their diet and livelihood strategies. In former times, for example, they never used to eat maize. Since the surrounding ponds dried up, they also lost fish as a major food item. Yields from the small-scale and rain-fed agriculture they practice are not sufficient and reliable to feed the community adequately.

Since 2006, they have been participating in WFP food relief programmes, which they regard as insufficient and unreliable. As life has become very expensive, they supplement their income by cutting and selling fire wood, which contributes to environmental degradation. They share this type of livelihood strategy with many other marginalized groups. Due to their marginal status and lack of education they unfortunately have only few alternative options that provide for a decent income.

Besides being pastoralists some members of the village in Turkana additionally carry out some bee keeping for honey. In former times the three districts cultivated rice, maize, beans, cassava, green gram, sugar cane and bananas. They had a rich diet and never suffered food shortages until when it started getting so dry and conflicts intensified such that they could not continue doing such kind of farming. The respondents explained that their everyday meal is Ugali, from maize and they sometimes sleep without food as the drought has reduced their produce significantly.

They have also lost their livestock to raids, diseases and drought. They had plenty of milk before and had so many goats they could slaughter from time to time but this is history they say. Women and young girls work in nearby ranches to get some money but the payment is as low as 200 KES and this is not enough to buy all the foods they need for a balanced diet.

The villagers now participate in food aid programmes too, which they experience as being unreliable. Lake Turkana used to supply them with lots of fish but its drying up and they do

not get as much as they did before, with the increasing population, only a few get some and the majority do not.

Most of them have started to diversify their source of livelihood. Yields from agriculture have declined sharply since the swamps dried out. The villagers regard freely grazing livestock as an increasingly uncontrollable problem, because the animals destroy their plots. Also some villages in Turkana district receive food aid, for example Kakuma. Food aid rations across the villages seem to range between 1.5-2.0 kg per household every 1-2 months.

The communities mainly relying on pastoralism, have meat supplemented by milk and blood from their livestock as their main traditional diet. The milk yield of their cattle depends highly on availability of pasture and water for livestock; however climate change and human activities increase pressure on both, so that the communities found their cattle gave only poor milk during the 2011 drought. In the three districts they increasingly also try to grow food crops, but with no or little success due to the scarcity of rain and water.

The impact on food insecurity on people's lives has been great. Child mortality rates have gone up. Starvation and hunger is a major problem. The female respondents said that pregnant women and children and the old were the most vulnerable groups. In 2012 the total number of deaths in Turkana alone was close to 50 cases in just two villages. These numbers might multiply as the climate is getting worse every year.

3.5.4 Findings related to the right to life

This was an important and yet private question that the respondents were quite emotional about. Those that were willing to talk about it mentioned that at least each family had lost a member either to conflict, or to starvation or sickness and they mention that they are sure these deaths are a result of the situation in their respective villages. Based on the village records that were availed to me, the majority that had lost lives were youths and men who took part in raiding activities. In total in 2012, they had recorded almost 80 deaths from two villages. This accounts for only recorded deaths and many were not recorded. The women mentioned that they had lost their infants and newly born babies due to starvation and diseases

that went untreated because they lacked hospital money and that the hospitals were far from the majority that those that were seriously sick died on the way.

Figure 2

3.5.5 Summary of findings

	TURKANA DISTRICT	SAMBURU DISTRICT	WEST POKOT DISTRICT
Crops grown	Mostly maize, millet, beans, sorghum.	Mostly maize, beans. Sorghum.	Mostly maize and beans.
Animals kept	Cows, goats and camels. Some people keep chicken.	Cows and camels and a few goats.	Mostly cows.
Income per year	Approximately 50,000 Kshs. Per year.	Approximately 60,000 Kshs a year	Approximately 50,000 Kshs a year.
Temperature changes	Temperatures have increased. Can no longer predict the rains. Mostly hot throughout the year.	The majority have abandoned farming. The rains are mostly unpredictable.	The rains are unpredictable. Too dry for crop farming.
Types of conflict	Cattle rustling and competition for grazing land.	Cattle rustling and competition for grazing land.	Cattle rustling and competition for grazing land.
Coping mechanism to climatic changes	Keeping camels, migration and trading with neighbors.	Migration and raiding.	Migration, raiding and trading.
Coping mechanism to conflict	Fighting back. Returning raided animals.	Migration and fighting back.	Mostly migration.

	Mobility.		
Months of conflict	Mostly during the dry seasons. Can happen anytime throughout the year.	Happens when there's no water and pastures for cattle.	Mostly during the dry months.
Any links between climate change and conflict	Majority said yes.	Mostly yes.	Maybe.
Water sources	Mostly boreholes but are drying up and must dig up new ones. Rivers are also drying up.	Boreholes and rivers.	Rivers.
Human rights concerns and violations.	Loss of lives. Loss of livelihoods, women are raped and infected with disease. Lack of shelter. No medical help during attacks.	Loss of lives, livelihood loss. Family ties are broken. No water. Food insecurity.	Loss of lives, livelihood loss, lack of shelter. No food, no water.
Has there been any intervention or reconciliation attempts between fighting groups.	Local leaders have tried but never successful.	None.	Has not been so far successful.
As pastoralists do you feel marginalized?	Yes. They feel marginalized and elected leaders from their areas have not	They feel marginalization is what has made them vulnerable.	The situation would be better if they got help from the state. Few schools in the

	<p>done anything to help them improve their livelihoods.</p> <p>They lack enough education facilities for their children.</p> <p>Limited medical facilities.</p> <p>No loans to improve farming strategies.</p>	<p>Few schools in the area.</p> <p>Very few hospitals.</p> <p>No loans.</p>	<p>area.</p> <p>Few health centers.</p> <p>Limited loaning facilities due to corruption.</p>
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3. 6 Climate change trends in Kenya

According to the IPCC report Africa as a continent is the most vulnerable continent to climate change and climate variability ,a situation that is aggravated by the interaction of multiple stressors occuring at various levels and low adaptive capacity. (IPCC 2007:435).Among the most vulnerable sectors are for example the economic sector,this is mainly assessed by the existing developmental challenges and the existing poverty and ,complex governance ,limited access to capital ;including markets ,infrastructure and technology ;ecosystem degradation,and complex disasters and conflicts.This have led to Africas weak adaptive capacity to climate change impacts and this in turn increases Africas vulnerability to projected climatic changes. (IPCC 2007).

The third assessment report of the IPCC identified impacts that are associated with climate change and variability,these include decreases in grain yields,changes in runoff and water availability,increased stresses resulting from increased droughts and floods and significant plant and animal species extinctions and associated livelihood impacts.The IPCC report also indicates that African farmers have adapted new ways to adapt to the changing climate but these adaptation stretegies may not be helpful in the longrun.According to the third

assessment report, the existing human and societal adaptive capacity in Africa is low and there is evidence to support this based on case studies that show future and current ways of adapting to climate change. Another important area that will be affected by climate change and variability greatly is the agricultural sector. Africa as mentioned before is of semi arid conditions and this can be a great challenge for most people that practise agriculture. If agriculture is affected then food security in terms of its access and availability will greatly be affected too. According to the IPCC (2007), there is a projected decrease in production in many countries and the number being as high as a reduction by 50% by 2020. Crop net revenues are predicted to fall as low as 90% by 2100 and it is predicted that the most affected will be small scale farmers. (IPCC 2007).

Water is a very important commodity and is necessary to sustain human life, water is important for daily use, life would be almost impossible without it. Water is necessary for crop and animal farming. The change and variability in climate has the ability to put additional pressures on water availability, accessibility and demand in Africa. Even in the absence of climate change the present population trends and patterns of water use show that more African countries will exceed the limits of their economically usable, land-based water resource before 2025, (Ashton 2002.) It has been projected that the number of people that will be affected by water stress in Africa is projected to be approximately 75-250 million by 2020 and around 350-600 million people by 2050s. (IPCC 2007: 444).

3.7 Current climate

Kenya is located in the Eastern part of the African continent. It lies across the equator at a latitude of 4° north to 4° south and Longitudes 34° east to 41° degrees east. Sudan and Ethiopia border Kenya in the north. Somalia lies in the east and the Indian Ocean lies on the south eastern part. To the southwest lies Tanzania and to the west lies Lake Victoria and Uganda. Kenya has a total area of 582,620 sq. km including 13,400 sq. km of inland water and 536 km coastline. Kenya is divided into seven agro-ecological zones ranging from humid to very arid. Less than 20% of the land is suitable for cultivation, of which only 12% is classified as high potential (adequate rainfall) agricultural land and about 8% is medium potential land. The rest of the land is arid or semi-arid. (Kunzler 2011).

Temperatures in Kenya have risen by 1°C over the last 50 years. There is a prediction that temperatures will keep rising over the years. The pattern in which the rainfall pattern is changing and the droughts are prolonging may suggest that the climate is indeed changing. (Economist 2009). Kenya is characterized by a tropical climate. Most parts experience the short rains from October to December and the longer rains from March to June. The reason for the increasing Environmental degradation can be pointed to the increasing trend of clearing forest cover so as to get space for resettlement and farming. An example being the illegal logging of the Mau forest that took place during the early 90s. (UNDP 2009).

In looking into whether there is evidence of changing climatic conditions it's important to look at the past trends of climate change, the present, extreme events and projected trends of climate change. Scientific research has indicated that climate change is taking place now, the past and the present changes are important as they help predict future possible changes.

According to a research carried out by UNDP (2009), the temperatures have indeed increased since the 1950s and that the frequency of hot days and hot nights have increased whereas the frequency of cold days and cold nights have decreased over the years. Rainfall is decreasing in the long rainy season and increasing in the short rainy season. There's also evidence that rainfall extremes have occurred in the short rainy seasons in both the coastal and the northern parts of the country.

3.8 Projected trends in climate change

The mean temperature is projected to increase by 1.0 to 2.8 °C by the 2060s, and 1.3 to 4.5 °C by the 2090s. All projections indicate that there will be increased frequency of hot days and nights. All projections indicate an increased frequency of hot days and nights. Annually, projections indicate that 'hot days' will occur on 17-45% of days by the 2060s, and 23-75% of days by the 2090s. Nights that are considered 'hot' for the annual climate are projected to increase more quickly than hot days, occurring on 32-75% of nights by the 2060s and 40-95% of nights by the 2090s. All projections indicate decreases in the frequency of cold days and nights (Kunzler 2011).

3.9 Analyses on changes in precipitation and Temperature

3.9.1 Precipitation

Global warming has a direct impact on precipitation. Due to increased heating, there is greater evaporation and as a result the surface of the earth dries up. This drying leads to increased and elongated droughts that last longer than usual. The water holding capacity however increases by 7% per 11°C warming. This leads to increased water vapor in the atmosphere hence, storms, whether individual thunderstorms, extra tropical rain or snow storms, or tropical cyclones, supplied with increased moisture, produce more intense precipitation events. Such events are observed to be widely occurring, even where total precipitation is decreasing experience shows that normal rains turn into showers This increases the risk of flooding. With modest changes in winds, patterns of precipitation do not change much, but result in dry areas becoming drier (generally throughout the subtropics) and wet areas becoming wetter, especially in the mid- to high latitudes: This pattern is simulated by climate models and is projected to continue into the future. (Trenberth 2011).

The data below shows these changes taking place in Northern Kenya. Precipitation has reduced from 1975 and the pattern indicates that it's likely that it will continue going down in the future.

Figure three

Decrease in total precipitation in mm in Marsabit (1975-2011)

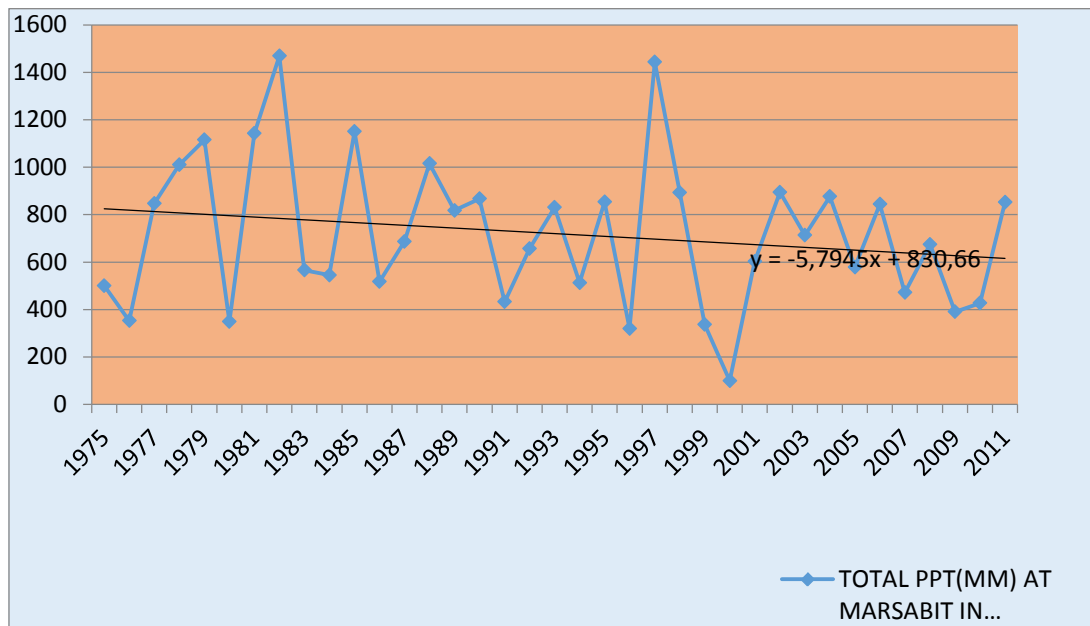
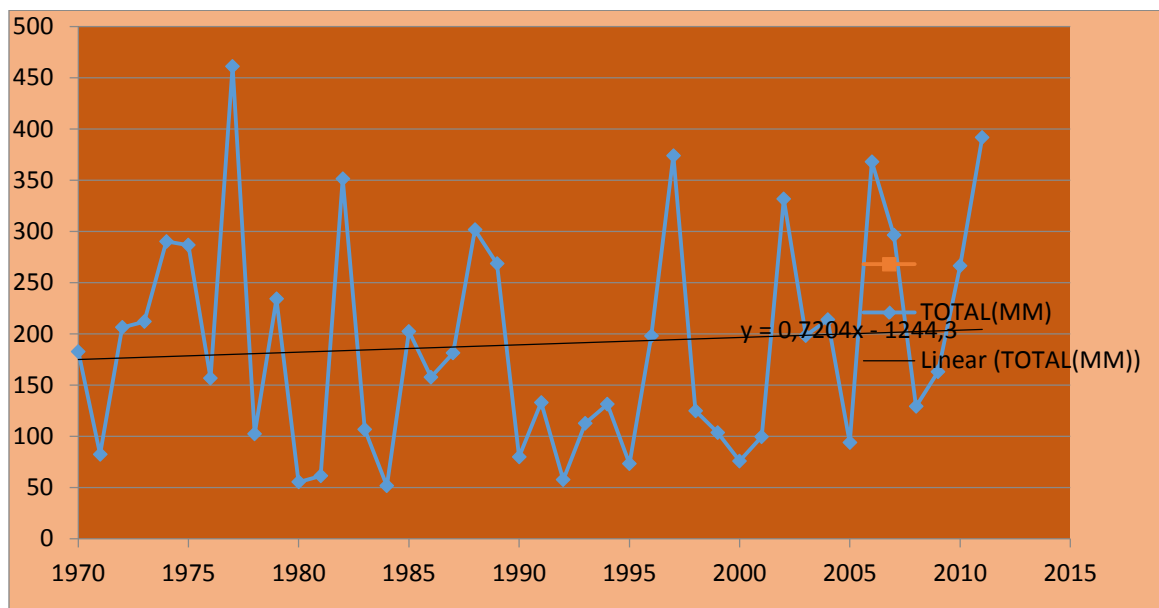


Figure four

Precipitation in mm in Turkana (1970-2015)



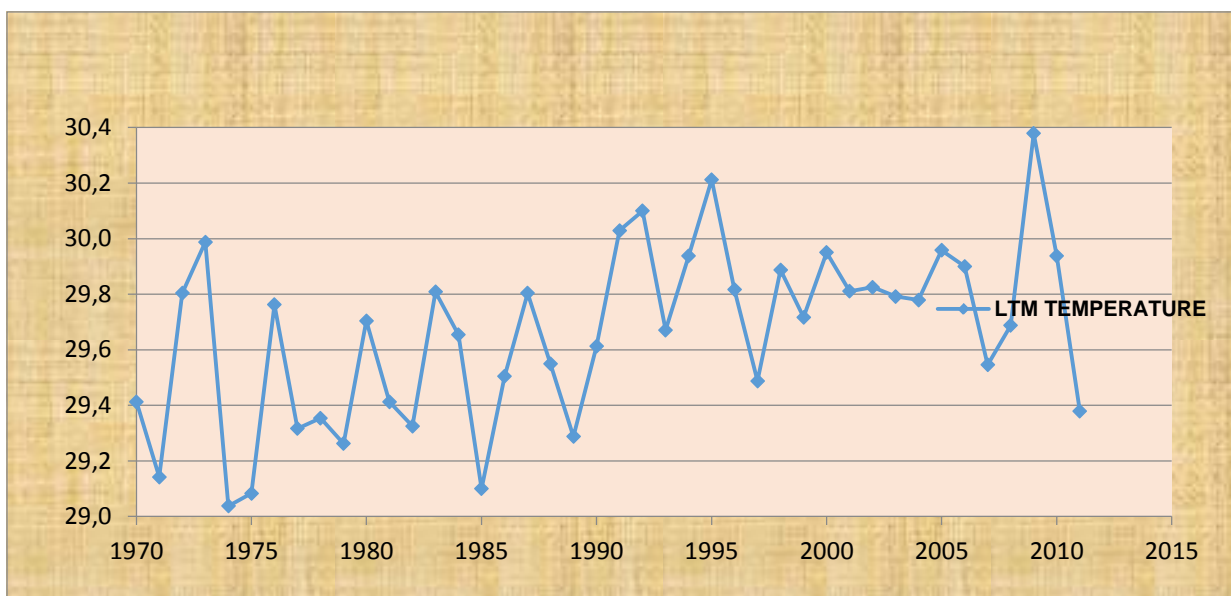
Both graphs indicate variation in precipitation over time. This is evidence that there is most likely to be a reduction in precipitation in Marsabit that is necessary for pasture growth and crop production.

Rainfall is mostly unpredictable in Turkana District. These had been an increase in Rainfall from 2010 but this rainfall was very unpredictable and was followed by very dry periods that were not conducive for any kind of farming.

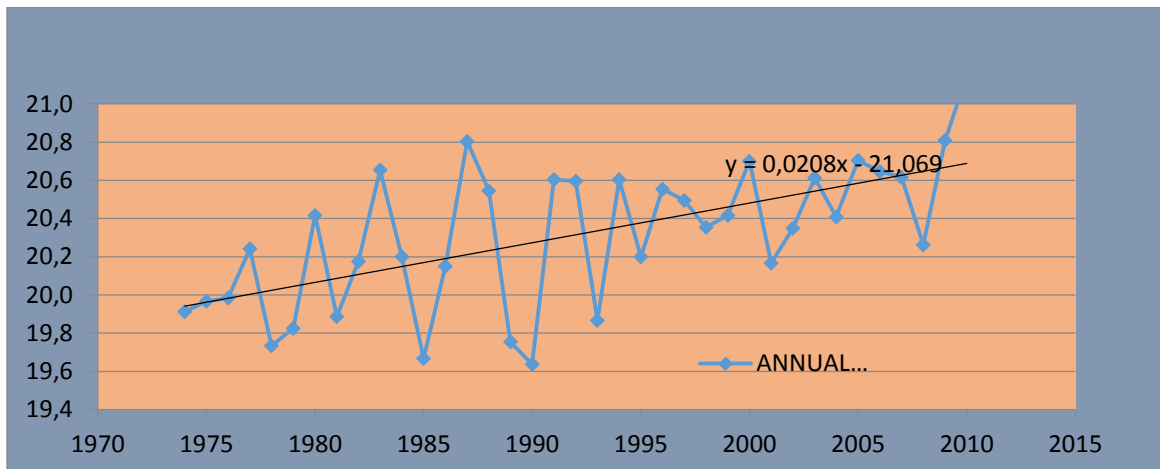
3.9.2 Temperature Analyses

The IPCCs fourth assessment report indicates that temperatures are most likely to go up in the future. This will have negative impacts on agriculture and other climate sensitive activities. The high temperatures in northern Kenya have made it a very dry place. Low rainfall and high temperatures characterize this region. Because of this, the arid areas in the North do not have a good agricultural potential. This among other reasons explains why many prefer to practice pastoralism. Both graphs indicate an increase in temperatures and this will most likely be the case in the future.

Increase in annual mean temperatures in Turkana 1970-2011



Increase in annual mean temperature in Marsabit (1974-2011)



Both graphs indicate that temperatures will most likely continue to increase over time. These graphs are based on data acquired from the Kenya Meteorological Department in Nairobi.

Based on data from the Kenya Meteorological department, the period between 1970 and 2000, a period of 30 years, the estimated mean annual rainfall in the area surrounding Turkana district was 217 mm .In comparison to previous years, this is an obvious indication that annual rainfall is going down. Based on the same data, within a period of 30 years, Northern Kenya has experienced 15 years of mild droughts. Out of these 30 years 5 of them were a period of extreme drought. The years that experienced drought are between 1982 and 1984, 1990 and 1994, 1999 and 2003 and 2009 was the year that experienced the strongest and the longest drought. One of the effects of these droughts is that it causes moisture stress within the natural vegetation. Those species that are tolerant to drought survive but most of it that is vulnerable is affected. Samburu and Pokot have a better vegetation cover than Turkana. Such droughts have direct impacts of the livelihoods of pastoralists as they are highly dependent on water and vegetation for their livestock. (Omollo 2009) and (data from the Kenya Meteorological Department).

From the data collected, over 80% of the respondents had noticed a reduction in drought occurrence cycle from 10 years to 3 years or less in Samburu, Pokot, Mandera and

Turkana. The droughts have a direct impact on ecosystems that are necessary to support livestock production. A reduction of the drought occurrence cycles is an indication that the years are mostly dry and this makes it hard for pastoralists to depend on livestock produce throughout the years. They lose their livestock during these periods and the milk production also goes down. A large number of respondents (approximately 80% of households in Mandera and 75% out of the total interviewed households in Turkana) of the respondents noted that the recent long and severe droughts are the main cause of livestock loss. Some of the factors that expose the people of Turkana, Samburu and Pokot to droughts are the severe and frequent cutting of trees, the land has almost no vegetation cover, overgrazing, soil erosion, poverty, the topography of the land which is generally flat among other factors.

Flooding is a rare occurrence in Northern Kenya, a close look at the data from the Kenya Meteorological department indicates that pastoralists in Northern Kenya are less affected by adverse effects of floods as compared to droughts. The years 1997 and 2006 were flood years according to some of the respondents. Insecurity and livestock raids contribute to vegetation changes in Turkana followed by droughts. Insecurity and livestock raids restrict movement of livestock resulting in overgrazing thus, compounding the effects of increased drought in more secure areas. The major coping strategy was migration to other areas, although this was being constrained by insecurity and conflict/livestock raiding. Structural issues characterizing vulnerability included access to markets for livestock and crop produce, access to health centers and access to roads that are by motorized transport. Few respondents in Mandera have access to markets for livestock and for agricultural commodities within 30 minutes walking distance. Also, few have access to a health center within one hour. A significant number of the respondents walk for over 6 hours to access the nearest livestock or crop produce market. The long distances to livestock markets constrain them from selling their weak livestock during droughts. (Olukoye 2004: 39).

4. Analytical framework

4.1 Double exposure conceptual framework

The concept of double exposure (Leincheke and O'Brien 2008) is used to analyse resource conflicts in Northern Kenya. This is due to the fact that this framework recognises the complex nature of social, political and economic outcomes in remote parts of the world. The framework acknowledges the fact that some of the outcomes we see at the local level come from local, regional and global dynamics. (Temesgen 2010).

Following this framework, two forces or stressors are identified as influencing pastoralist livelihoods and these stressors are outside the control of the pastoralists themselves. These two factors are identified as the worsening climatic factors and the policy environment. When we assess the situation in not only northern Kenya, but the whole horn of Africa, the prolonged and very frequent droughts and the current unpredictable rainfall patterns affect pastoralists greatly, it robs the pastoralists of their only capital, and that is their livestock. These droughts have great effects on the pastoralist livelihoods.

The policy environment can be seen from different levels. National policies have economic growth as the main goal, this affects pastoralist livelihoods. The current push towards market oriented development paths by international financial institutions (Rankin; Goode and Maskovsky 2001), has for a long time had negative consequences on local communities.

Policies aimed at encouraging private investment and entrepreneurship have led to loss of important dry season grazing areas. Large tracts of pastoral land have been handed over to private investors and this has had the negative influence of disturbing the seasonal migration of pastoralists and reducing available pasture land available for the animals.(Interview with the local chief of Baragoi village).The latest trend of introducing and establishing ranching cooperatives in northern Kenya is an obvious sign that private property regimes have become of greater significance than the pastoralist customary institutions that are based on communal property regimes(interview with local chiefs in Samburu).These two factors greatly affect pastoralists in that these intensify competition among pastoralists for land and water.

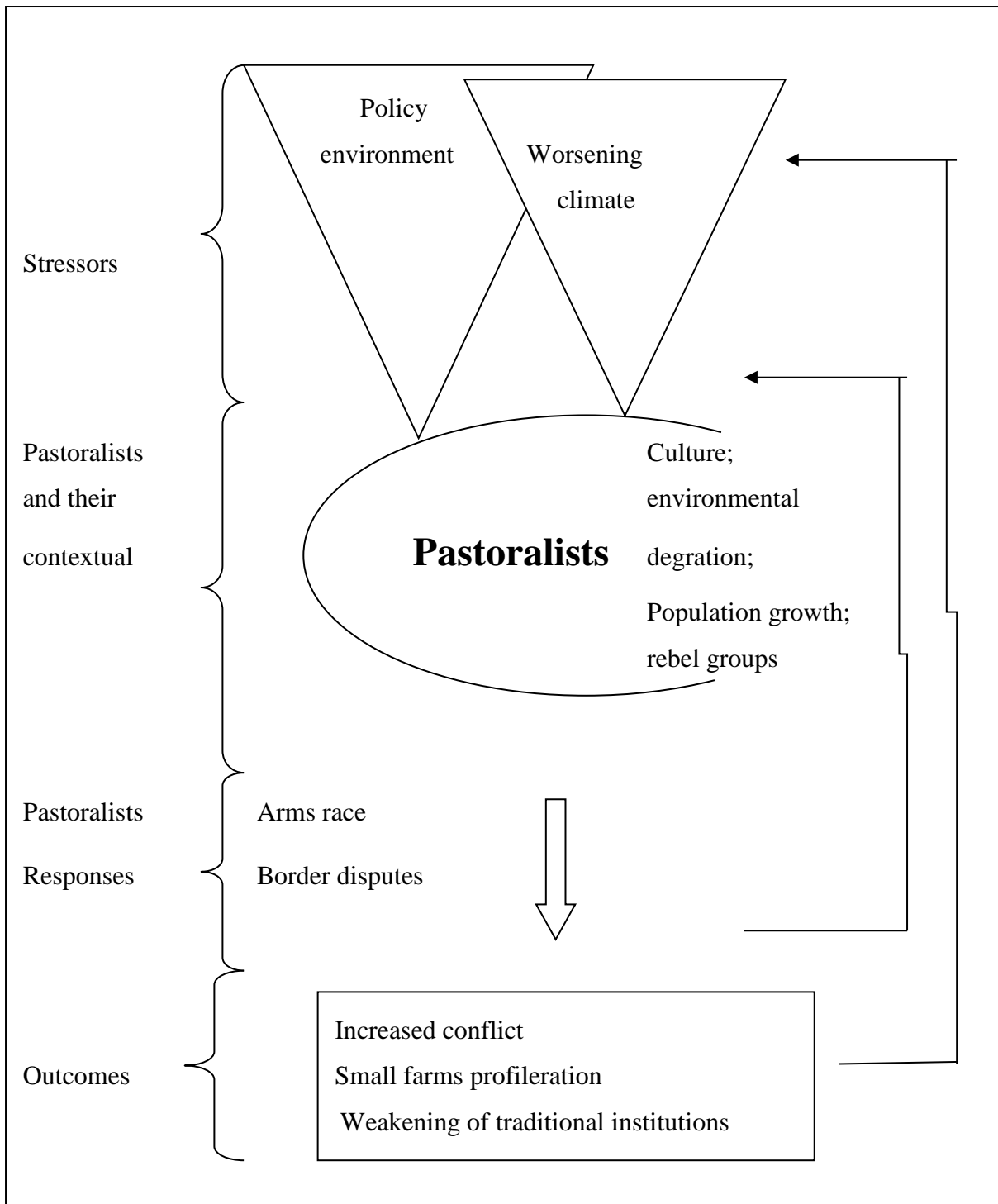
Another important factor is the increasing local, regional and international demand for meat. The increasing prices of meat and cattle attract private entrepreneurs to prime pasture land.

The need to make greater profit become a problem when the demand of pasture land by private investors is met by grabbing pastoral grazing land. This affects the livelihoods of pastoralists (Temesgen 2010).

In northern Kenya, the current political processes have contributed to boundary disputes and the outbreak of conflicts over the years. Tribal and ethnic politics has sparked disputes and conflicts between different clans and ethnic groups. The current competition among political elites from pastoral communities to increase their political influence and expand their political constituencies has resulted to some extent in similar tribal conflicts. (CEWARN 2005). All these factors mentioned above has greatly led to deteriorating relations between different tribal communities.

The stressors mentioned above work hand in hand in the contextual environment of population growth, continued environmental degradation and a culture of cattle raiding. This results in increased conflict, small arms proliferation and weakened customary institutions, pastoralists respond to this by increasing their arms race and also engaging in border disputes to attain unchallenged access to land and water. (Temesgen 2010).

Figure 7: Double exposures



Sources: Leichenko and O`Brian 2008

5. Discussion

5.1 Climate change and conflict links

It has been predicted that climate change may result in a drop in the human carrying capacity of the earth's environment, climate change will most likely affect or lead to water, food and maybe energy shortages as well as extreme weather patterns. A prediction by the US department of defense shows that resource constraints and environmental damage could easily lead to political instabilities, skirmishes and even wars. (Nils Gleditsch 2007). The church aid charity warns that 184 million people could die in Africa as a result of climate change before the end of the 21st century. This will be a as a result of hunger, famine, drought and conflict. The Oxfam has established links between climate change and conflict in Northern Kenya and has indicated that the Turkana pastoralists engage in conflict with their neighbors due to the re-emerging droughts brought about by climate change. (Oxfam 2010).

It is not easy to establish the links between climate change and conflict. Most of the debates talked about in the media and by politicians hasn't been backed by adequate evidence. Jon Barnett and Neil Adger (2010) and many others have asserted that though there could be links it is not clearly established. Some scientists argue that climate change and conflict may lead to serious health issues but they also continue to say that there is insufficient evidence that climate change leads to violent conflicts. A lot of literature about the links between climate change and conflict have been abit speculative. And have mostly provided that this could be a possibility in the future. (Adger 2010).

Evidence has shown that climate change could easily be linked directly to mass migration. When climate changes, people experience droughts and floods and other intense consequences that make their areas inhabitable and hard to survive on. An increase in populations makes in hard for a stressed environment to cater for the needs of all its inhabitants. Droughts makes it hard for farmers to farm anymore as well as for pastoralists to take care of their animals as they should. This burden on the environment makes people move from extremely affected places to places that can still support their daily needs. This movement of people creates pressures on the receiving areas and this could lead to conflict.

The IPCC has opened up a debate on climate change and in this debate tries to summarize the causes and possible effects climate change. Consensus hasn't been reached however many are in agreement that there is evidence regarding the long-term temperature deviations in the

North. (Nils Gleditsch 2007:1). While there has been warm periods in previous centuries the recent temperature rise is unprecedented and is hard to explain without the reference to the influence of human activities.

Climate change may lead to many areas being inhabitable in the long run people will experience changes in rainfall patterns, floods, droughts, the melting of icecaps that results in sea-level rise and a temperature rise which can affect agriculture negatively. Some areas will be warmer but some will heat up more than others. Other areas may become too hot for human habitation and some parts may become fertile for crop farming. (IPCC 2007).

Different populations will be more vulnerable to others and according to the IPCC reports; the vulnerability of different regions and populations to climate change is largely determined by their access to resources, information and technology. Another important factor is related to how strong their institutions are. Some states will be able to adapt better than others. Climate change will also have an impact on human health. Climate change may lead to health consequences through factors such as food, safe drinking water, secure shelter and possibly an increased spread of infectious diseases such as malaria, dengue, cholera and possibly yellow fever and not forgetting malnutrition that can be a consequence of starvation and hunger. Large epidemics could lead to serious socioeconomic impacts and this could alter the relations between communities and countries in terms of power and material resources. (Gleditsch 2007).

Poverty is another factor that could increase a community's vulnerability to climate change impacts. The IPCC (2007) found that the changes in climate are likely to have adverse impacts on ecosystems as well as economic sectors such as forests wetland and agriculture. Droughts have affected agriculture in most parts of Africa and in Northern Kenya especially where my research was conducted. This has an impact on the socio economic systems as well.

Population growth, migration and degradation of natural resources is likely to affect agriculture productivity in many parts. Developing countries rely the most on climate change as most of them depend on agriculture for a living. Agriculture is climate sensitive and its variation affects the same. Poverty and inadequate knowhow and lack of technology make it hard for developing countries to cope with the negative consequences of climate change. (Gleditsch 2007).

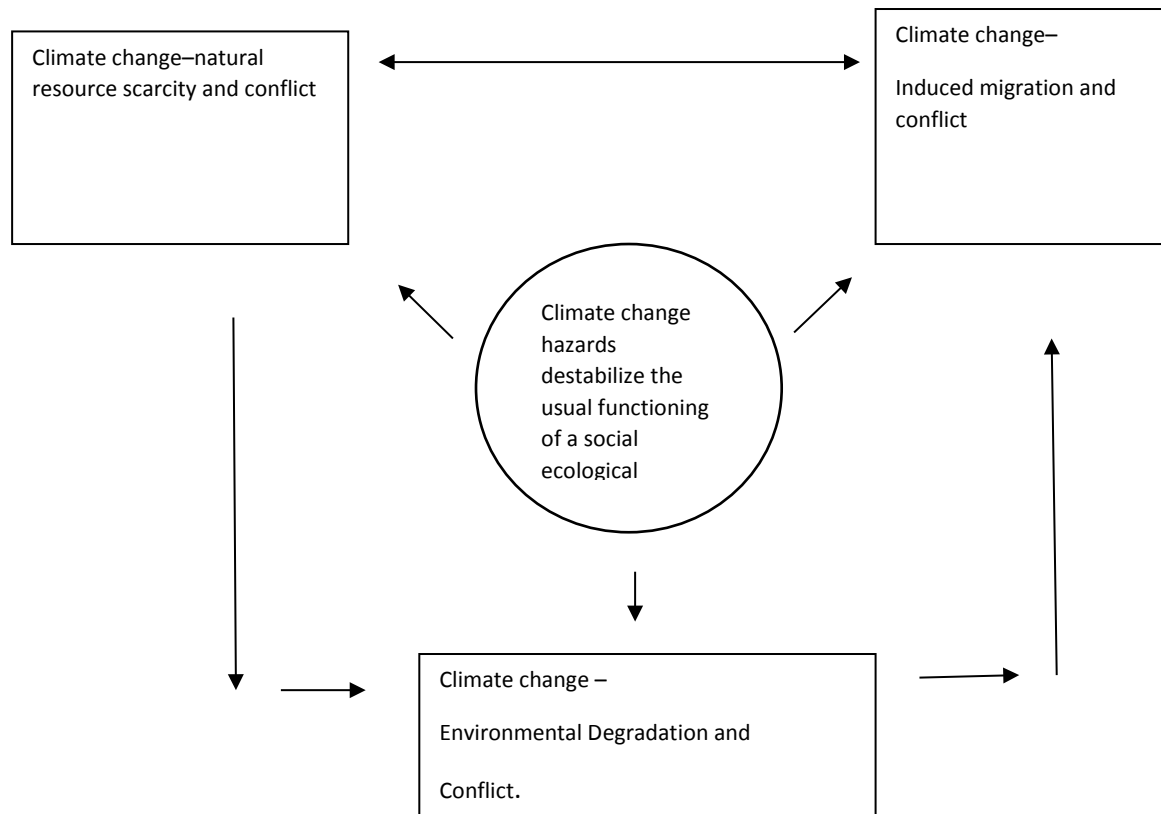
According to the International Peace Academy, national wealth and political institutions have a direct impact on how people will adapt to climate change. Possible adaptation mechanisms could be resettling people from coastal regions especially if these areas are prone to flooding and in areas that are prone to droughts the introduction of irrigation projects to farmers and improving water conservation in drought-affected areas. In developing countries, corruption and other factors has made it very difficult to introduce these reforms. Many scientists who have written articles on the links between climate change and conflict have concluded that the links between the two are unclear. The IPCC (2007) have given comments about the links between climate change and conflict by saying that while conflicts may occur due to environmental changes, there still is mixed evidence. Several mitigating factors are likely to complicate the relationship between climate change and conflict.

Drought and desertification might lead to decreased pastures and a decrease in water available for either crop farming or for animal farming. Water is an important commodity and its scarcity will easily lead to water wars where local communities fight for the few remaining water sources. Other scientists are of the view that climate change may lead to cooperation as people learn to find ways in order to allow for better ways of sharing the scarce resources. This in my view is only possible where there are strong institutions to govern the sharing and distribution of water rights.

Whether climate change will lead to conflict or cooperation depends on many other factors. States or communities that have a good mediation and dispute resolution mechanisms will be able to reduce the occurrence of conflict. This is also dependent on the nature of existing property rights and the ability to enforce agreements. According to the IPCC (2007) report, the links between climate change and conflict are unclear.

The diagram below is used to give a better understanding on how to trace links between climate change and conflict.

Figure 8: Understanding of the Climate Change–Conflict links. (ACCORD, 2011)



Source : (ACCORD 2011)

There are many ways of looking at the links between climate change and conflict. Whereas there is a lot of disagreement on this issue, the framework above shows that due to changes in climate and the consequent disruption of the ecosystems, there will be possibility of climate change hazards. These are hazards such as flooding which comes as a result of heavy rains, continuously changing weather conditions as well as prolonged dry spells due to droughts. These climatic changes have consequences and violent conflict may or may not occur as a result. Climate change has a potential of leading to conflict especially in developing countries. (Gounden 2011).

5.1.1 Climate change-induced Environmental Degradation

Based on the framework above, climate change may directly result into climate change induced environmental degradation. Climate change changes rainfall patterns, hot areas may become hotter, these changes leads to environmental degradation by lowering the environmental conditions necessary for human survival. (Suhrke 1993).When populations are faced by droughts they are forced to seek alternative places to settle in to make a living. Nomadic pastoralists for example find themselves very limited and restricted in their search for water and pasture. Based on my findings it was common to find that pastoralists and farmers from one village get into violent conflict with other pastoralists from other villages when the pastoralists encroach on the farmers farms in search for pastures and water. The increasing deserts that's is linked to climate change is a reason for the complete eradication of pasture and water zones which served as buffers during the dry seasons.

Climate change over a period of time affects the normal functioning of ecosystems that interacts with humans and affects how humans access certain resources vital for their survival (Gounden 2011:5).

5.1.2 Climate change induced natural resource scarcity

Climate change plays a direct role in reducing the availability of natural resources. Droughts and floods make land unproductive in the long run. Farmers who practice crop farming will not be able to do so in flooded areas. The land available for farming is reduced and this affects productivity. Climate change also leads to decreased water availability. According to the IPCC (2007) there is an increase in water scarcity in many parts of Africa. And there's is a prediction that water scarcity will increase in the future. Water shortages will be experienced due to the increasingly changing rainfall patterns that leads to increasing droughts and prolonged dry spells. Farmers that depend on water for their agriculture are affected by these shortages and as a consequence crop production is affected negatively. These impacts do not just affect crop farmers, animal farmers are also affected as they need water and food crops for their animals. (Oxfam 2010).Climate change therefore deprives these people of their livelihoods. This can in a way spur conflict especially in areas that are prone to resource related conflicts. In Northern Kenya, Turkana district especially findings indicated that due to climate change, the inhabitants of this region have experienced increasing drought. Water sources have been disrupted and therefore decreased amounts of water for animals and for

irrigation purposes. During the dry seasons the pastoralists opt to move to neighboring lands in search of pastures and water. This increases tension between them and the neighboring groups. This is due to the increasing competition for the continuously decreasing natural resources. This results in attacks and violent conflicts (Pantuliano 2009) in (Gounden 2011).

5.1.3 Climate change induced Migration

This is another dimension of looking at the links between climate change and conflict. Based on available statistics there is evidence that in 2008, 1.4 billion people in the developing world relied on Agriculture for their food production and income generation. Approximately 98% of these people are employed in the agricultural sector. (Oxfam 2010) in (Gounden 2011). As explained above climate change hazards lead to floods or droughts and therefore a decrease in natural resources such as water and land. This decrease in natural resources has a direct impact on food production and income generation. This has a direct impact on income generation as well. Reduced food production, employment and income generation are disrupted and this causes rapid migration in Africa. In Ghana for example rural communities have moved drastically from the drier parts of the north to the south in search of better conditions in the south. As a result the stability of the south is tested due to the competition for resources. This might be a threat to peace. (Gounden 2011:7).

Due to increased migration populated areas become more populated. Increased populations lead to increased competition for natural and other available resources. This is directly happening in Northern Kenya where it's evident that people are slowly moving to the south. People from Turkana are moving to Mandera and others are slowly migrating towards Uganda and the pressure they have on natural resources is what makes the original settlers protest.

5.2 Climate change and conflict in Northern Kenya

It has been assumed that climate change will result in depletion of natural resources, which will lead to increased demand of reduced resources. This might eventually lead to increased socio-economic tension that might as a result lead to violent conflict. None of these links in the chain of causality is straightforward. As noted before, the impacts of climate change will vary from region to region. There will be either increased drought and in some cases even, increased rainfall. Climate change is among one of the many factors that lead to depletion of

resources, it would therefore maybe not be so correct to say that conflict is the only driver for conflict. An important factor that's important to mention is the fact that it's not always the case of increased demand leading to reduced supply, in relation to natural resources, it's how the scarce resources are managed that will determine whether there will be increased or reduced conflict. (IISD and Saferworld 2009).

In northern Kenya the vulnerability to climate change is likely to vary across and within villages and households. The poorest are said to be the most vulnerable but can be untrue because their climate adaptation and coping strategies may be more developed than those of others. Many rural communities in Africa have already developed ways to adapt to climatic changes. Some have asserted that pastoralists are more adaptable to climate change than others because their livelihood and lifestyle is based upon adaptation to extreme climatic conditions and scarce resources. (Davies and Nori 2007).

Based on above, there are a number of ways in which climate change is likely to affect the availability of natural resources, which may lead to violent conflict. Rainfall feeds all water sources such as rivers and lakes. When water sources are depleted or disrupted, livelihoods are in turn interrupted. Lack of clean water will also lead to negative effects on people's health and well-being. The need to control water sources might in the long run lead to political tension and even conflict.

Many people in Kenya rely on water for agriculture and livelihoods, small scale farmers depend a lot on the rainy season to make a living. The constant changes in rainfall patterns will have a great impact on food security which is already under pressure due to the rapidly increasing population. (Population is projected to increase in Kenya from 35.6 million in 2005 to 46.2million by 2015) (CDC, IISD and Saferworld 2009). This increase in population will not only increase food insecurity but it will also decrease the land and space available, this might in turn lead to conflict. Since the rural people's livelihoods are greatly dependent on climate change, there might be increased displacement and even urban migration. This will put pressure on the urban cities which do not have enough resources to cater for all and this might also lead to unrest. In the longer term, any changes to the distribution of economic wealth, assets and resources caused by changing climatic conditions will potentially be disruptive in a country where access to these assets is already politicized along ethnic lines. (CDC, IISD, Saferworld 2009).

As mentioned earlier, the vulnerability to climate change depends to some degree upon adaptive capacity, both at a national and community levels. It has long been mentioned that

poorer countries will bear the biggest burden due to the fact that climatic variability increases with the degree of aridity and that most of the world's dry areas is located in developing countries. In these countries, livelihoods are mostly dependent on natural resources and on environmental goods and services, and their ability to improve on important services like clean water is usually lower. These are the issues that face the pastoralists in Northern Kenya and the ASALs in general. They are faced with high levels of poverty and have restricted access to capital and this makes their adaptation much difficult. (Fuller 1999).

The impacts of climate change in northern Kenya can be greatly destructive, given that people rely heavily on natural resources and that the region is already faced with food insecurity. Pastoralists have been referred before as 'climate change canaries' (Christian Aid 2006) since their livelihoods are so vulnerable to environmental changes. Based on my research in this area, it was evident to see that the adverse changing climate has contributed to lowering income levels, the expansion of settlements lacking basic services, migration, and deforestation and growing dependence on aid. Other do not view pastoralists as victims of climatic changes and are of the view that pastoralists can learn and make good use of their flexibility and mobility that characterizes their culture to increase their adaptive capacity. Based on my analysis, it was clear to see that even mobility as an adaptive capacity has been greatly constrained given the socio economic realities in Kenya.

There are potential connections between climate change and conflict in northern Kenya. Pastoralists are highly dependent on water and pasture availability. These are dependent on distribution and incidences of rainfall. Less predictable and decreasing rainfall due to climate change and increasing evapo-transpiration rates may mean that the supply of these resources goes down. Rising scarcity is likely I likely to lead to increased conflict between pastoralists and crop farmers. Long periods of drought in northern Kenya have been able to confirm this pattern. Conflict will break out as tribal clashes over water points and pastures and over time these clashes may grow into intense conflict over the need to control land and water and pasture points.

Pastoralist coping mechanism like migration can also be a cause of conflict. During short droughts pastoralists mentioned that they only moved short distances and would settle in neighboring villages but during high stress periods the pastoralists will usually take their livestock and move as far as possible to find water and pasture. This kind of wide migration

leads to one group of pastoralists meeting another migrating group, sometimes conflicting tribes meet and this makes conflict inevitable. Conflicts also arise where these pastoralists settle in areas that are private property, or areas claimed for farming, ranching or migration. Such conflicts usually arise on a seasonal basis during the dry season. Such conflicts are likely to increase if climate change forces greater migration of pastoral groups. Since climate change is predicted to result in increased variability, these adaptive strategies will be used more and this will increase conflict and make conflict management even more difficult. Based on the discussion above, it's therefore safe to say that climate change, though not the only factor contributes greatly to the outbreak of conflicts in the three districts of Turkana, Samburu and Pokot.

5.3 Pastoralism

The Turkana district and the surrounding parts of northern Kenya is mainly affected by inter-ethnic and cross-border conflicts. These conflicts are mainly resources based and involve mostly pastoralists. Pastoralism is a life style that's adapted in harsh environments like the arid and semi-arid lands. Pastoralists keep a large number of animals, they move animals, exchange them and most households said that they sold their animals sometimes to deal with the cyclical droughts. In Kenya, the dry and pastoral lands occupy more than 80% of Kenya and are home to approximately 4 million pastoralists who constitute more than 10% of Kenya's population. (Kirbride, M, M, and R. Grahn 2008.). In most Parts of Northern Kenya livestock keeping and livestock production is the main source of livelihood and food security. Kenyas' livestock production accounts of 24% of total Agricultural output. Over 70% of Kenya's livestock is kept in the arid and semi-arid parts of the country that being mostly in the northern parts of Kenya. (GoK 2005b).

5.4 The culture of cattle rustling. The role of men, women and the youths in conflict

In Northern Kenya, conflict is part and parcel of the pastoral culture. Cattle rustling is considered as a big thing and those who take part in many raids are seen as heroes and they get a lot of respect, they are celebrated in songs and poems. As mentioned earlier, the people of Turkana, Samburu and Pokot lose their cattle during the drought and raiding is a way for them to restock and recover what they have lost in the drought. Interviews with representatives from Turkana and west pokot admitted that raiding was necessary for them to get back what they lost during intense droughts. (Omolo 2009).

Each member of the society has a role in these raiding activities. Elders (between the age of 40 and 55) bless young warriors (between the age of 20 and 40) before they go out raiding neighboring communities that they consider enemies or non-allies. Spiritual leaders also have a role in these raids. They bless the raiders before they leave and perform sacrifices to foretell or predict whether a raid will be successful or not. And where these spiritual leaders think that a raid will not be successful then the young warriors have to wait until the next time to carry out a raid. Elders and spiritual leaders also play an important role of resolving conflicts that arise between clan members or neighboring villages. Because of this function the clan elders and spiritual leaders are highly respected. However their ability to resolve conflicts is affected when conflicts arise between two different ethnic groups. Such conflicts are best resolved when elders from both sides join forces to end such kind of conflicts. In 2009, there was a big conflict between the Turkana and the samburu communities, and this conflict was resolved when elders from both sides intervened.

Women too play an important role in the pastoral communities. They are both agents and victims of conflict. Raiding as mentioned before is considered a heroic act and those men who come out successfully after a raid are considered heroes and become very attractive to women. Some of them get marriage proposals immediately when the raids are over. A successful man is considered rich as they come back home with a large number of cattle, this enables them to pay bride price. After successful raids a woman's social standing in the village is increased due to the fact that the husband came home with cattle. Such a household is given great respect in the village. Such men are considered the pride of the village and are praised at large. Women do not take part actively in planning raids. Initially it was common to spare children and the elderly during raids but recently based on interviews with the chief in Kakuma, the new trend is to spare no one. An example was a raid that was carried out

recently between the samburu and the west pokot communities, 62 people were announced dead and the majority were women and children and the elderly. By attacking women the raiders hope to pass a message to the enemy community. Looking at what has been happening over the last 3 years, it seems as if women and children are the most vulnerable to these conflicts as they cannot defend themselves. In Samburu, women said that the new trend is to carry women and children along with the raided animals, some are raped on the way and when they are not needed anymore they are left in the desert with no food to eat and no water to drink, then they have to find their way back home, some of the women that were interviewed mentioned that some of the women died on the way or were attacked by animals, some of them got sick and by the time they get back home, their husbands do not want to have anything to do with them again. The youth are at the forefront of these conflicts, poverty and unemployment pushes them to take an active role in these raiding exercises.

5.5 The vulnerability of pastoralists to climate change and conflict

Pastoralism is a rational, adaptable, tried and tested production system uniquely suited to the dry lands Pastoralism developed autonomously across the world's dry lands from some 7,000 years ago (Brooks, 2006). It is still widely practiced today and remains a dominant feature of rural East Africa. Pastoralists live in some of the harshest, most climatically variable landscapes, and many still manage to exercise their traditional way of life despite efforts to settle them and to 'modernize' their livelihood system. The people of Turkana in Kenya are pastoralists, they have practiced pastoralism for thousands of years. (Omolo 2009).

Pastoralists are specialists. Through traditional knowledge, they possess the knowhow on adaptation strategies even in extreme conditions. They know how to make good use of the scarce resources even during unpredictable rainfall.

A livelihood is defined as 'the capabilities, assets and activities required for a means of living; a livelihood is sustainable when it can cope with, and recover from, stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihoods opportunities for the next generation.(Chambers and Conway 1992).

According to Chambers (1989) 'Vulnerability of households or population groups to particular disasters has two aspects. The first is the external shock and the second is people's capacity to cope with the shock. Vulnerability may be related to particular livelihood systems, to wealth status, or people's social or political status'. Vulnerability is often seen as the other

face of resilience: a group of people is vulnerable when it lacks the resilience to resist an external shock. Pastoralist communities have five important livelihood assets. These are; Human assets such as: education, health, nutrition. Natural assets like: grazing land, water sources. Financial assets like: livestock, credit. Social assets like: livestock, community social support and finally, Physical assets like: livestock herd, infrastructure. . (Chambers 1989). To ensure that pastoralists have better livelihoods outcomes, they often rely on specific strategies to manage their livestock effectively. Their livelihoods strategies have evolved over centuries in response to the local environment and the hot and dry climate in which they live, with low and erratic rainfall typical of the arid and semi-arid lands (ASAL). Among the most important strategies is accessing and managing natural resources, mainly grazing land and water sources, and maintaining high levels of mobility across large tracts of land to make the most effective use of scarce resources and in response to environmental conditions (Desta et al 2008; Markakis 2004). These sophisticated and dynamic strategies have allowed pastoralists to cope with the threats and risks that characterize their environment and to maintain a viable production and livelihoods system. Drought is a major external shock and a primary trigger of livelihoods crises in Northern Kenya. Droughts in these areas reoccur and come in cycles, this have over the years defined pastoralists' way of life in this region.

In recent years however, it has become evident that pastoralists' strategies have been significantly strained and pastoralists' adaptive capacity to resist or recover from drought-related shocks has been increasingly affected. There's evidence that the vulnerability of pastoral groups in Northern Kenya and The Horn of Africa as a whole is not only as a result of environmental stress but also due to complex and multi-dimensional political, economic and social processes (Oxfam 2008).

Pastoral communities have for many years experienced political marginalization, and this is one of the main reasons why they remain vulnerable to both climatic changes and conflict. Pastoralists are the most politically marginalized group in the HoA and East Africa (Oxfam, 2008). According to Morton, 'there is an increasing acceptance that the major issues in pastoral development are related to policy and governance: These are issues that are related to conflicts and insecurity, livestock marketing, land rights, inadequate provision of services and infrastructure, drought and dependence on food aid' (2005: 1). Political marginalization can be understood as the result of an imbalanced power relation between the state and pastoral civil society – understood here as community-based organizations, local associations, and pastoral groups. On the one hand, the political marginalization of pastoralists' communities is the

result of long-standing governance failures, non-responsive and unaccountable institutions and politicians and policy-makers lacking the will and incentives to include pastoralists' interests in national policy debates. On the other hand, pastoralists often lack the ability to organize themselves and sustain the collective action required to exert political leverage in policy circles. In addition, the members of the pastoralist civil society groups who should represent the needs and interests of pastoralists and support their rights and voices in modern governance institutions have in some cases become detached from pastoral lives and systems. An increasingly common phenomenon in the HoA is the emergence of 'pastoral elites': while they can be a force for good as those pastoralist representatives have gained a formal education and have easier access to decision-making circles, at the same time they have lived in urban centers for a number of years; some have become alienated from pastoral settings and 'may not have the interests of pastoralists at heart' (McGahey and Davies 2007: 18) in (HPG 2009).

Policy-making is a highly political process which involves dealing with and attempting to reconcile the interests of different parties. Interests are often conflictual and issues of power are of crucial importance. Those who are backed by political and/or economic power will succeed in pushing forward their interests, while the poor and marginalized will struggle to make their voices heard and have their interests and priorities addressed in decision-making circles.(HPG 2009).Some of the reasons why pastoralists remain vulnerable to climate change and conflict are discussed below.

5.5.1 Marginalization of pastoral communities

The exclusion of pastoralists from national political, economic and social life dates back to the colonial era. The colonial enterprise interfered with the pastoralist system and led to the progressive deterioration of pastoralist livelihoods and social fabric. Pastoralists' mobility became constrained within newly created states boundaries, and their internal movement within new states became increasingly restricted by district, and sometimes location, boundaries, nature reserves, tribal grazing zones etc. Their land and water resources were confiscated to pave the way for agricultural expansion and eco-tourism projects. Virtually no investments in technological innovations, infrastructure or social services were made in pastoralist areas (Markakis 2004) in (HPG 2009). With independence and African self-rule, already strained pastoralist livelihood systems were further undermined by national economic

development strategies that closely followed colonial blueprints and priorities. In the post-independence years, recurrent civil conflicts, forced displacement and progressive impoverishment have further eroded the social and material base of pastoralism. (HPG 2009). With the fall of authoritarian regimes and the widening of the political space in many African countries during the early 1990s, pastoral civil society groups started to proliferate. A more recent step forward is the establishment of Pastoral Parliamentary Groups (PPGs) in a number of countries, including Kenya, Uganda and Ethiopia. The Pastoral Affairs Standing Committee (PASC) as founded in 2002 within the Ethiopian Parliament to promote sustainable pastoral development and represent the interests of pastoralists. The members of the PASC are drawn from different ethnic groups and states. The PASC has three main roles (Morton 2005). Legislative – Assessing issues that require policy decisions and ensuring that policy reflects the interests of pastoral communities. Oversight – Supervising activities such as various aspects of governance, infrastructure development, food security and early warning systems. Representation – Focusing on advocacy activities to promote pastoralist skills and improve attitudes towards pastoralists. (HPG 2009). Pastoralists on the Kenyan side benefit from this resolution as they are always constantly moving across borders.

The Kenya Pastoral Parliamentary Group (KPPG) is open to any member of the Kenyan Parliament with an interest in pastoral development (Wario 2004; Livingstone 2005). The KPPG's main policy objectives for pastoral areas are: advocating for community-based property rights; lobbying for the right to food, education and health; and advocating for pastoralists' inclusion in national poverty alleviation policies (Wario 2004).

The PPGs are generally faced with some weaknesses and are often co-opted by powerful urban elites, and so far they have had a limited impact on pro-pastoralist policy-making and implementation (Morton 2005; Oxfam 2008; Grahn 2008; Wario 2004). According to Markakis, to date none of these organizations has 'been able to initiate a single piece of legislation of significant benefit to their constituencies' (2004: 24). The disappointing track record of these groups and their limited success in bringing about significant change can be understood in relation to issues of representation, internal capacity and broader processes of democratization at the national level.

Despite the PPGs' stated objective of promoting the interests of pastoralist communities, questions can be raised about the effectiveness of their representation. For example, several members of PPGs belong to the so-called 'pastoralist elite': people of pastoralist origin who, for various reasons, have been detached from the realities of pastoral life (McGahey and

Davies 2007; Oxfam 2008). Within the KPPG, well- educated parliamentarians are called ‘the Nairobians’, who ‘have not lived the pastoralist life and hardly ever go back home’ (Livingstone 2005: 29). As such, ‘their effectiveness as representatives of the pastoralist communities is minimal’. In addition, the PPGs, like many other civil society groups, often have limited financial resources and poor management and technical skills (Oxfam 2008). For instance, despite the fact that some members of the KPPG are well-educated, others ‘are illiterate and sign documents with their thumbs’ (Livingstone 2005: 29). Similarly, some members of the PASC have only elementary or secondary school education and as a whole the committee ‘lacks technical know-how to challenge the policy- makers and influence policy in favor of pastoralists’ (HPG 2009:73).

5.5.2 Geographical remoteness

The pastoralist system and way of life requires high levels of mobility over large tracts of land, and pastoralist communities in the HoA have always been highly mobile. Pastoralist groups live far away from the national capitals where economic activities are concentrated (Morton 2008). Their lands are generally perceived by national governments as ‘marginal ... with little economic potential’ (Oxfam 2008: 14). The fact that pastoralist groups usually represent a low proportion of the national population and are dispersed across different parts of the country means that politicians often consider pastoralists a ‘minority vote’ and consequently have little interest in including pastoral areas in their electoral campaigns (Hesse and Odhiambo 2006). In addition, the isolation and dispersal of pastoralist communities across vast areas of the country, and the poor infrastructures of pastoral areas, make collective action problematic and social organizational capacity difficult to build (Grahn 2008). This significantly hampers the ability of pastoralists to formulate coherent and collective demands and transmit their requests and preferences in a convincing manner to policy-makers. (HPG 2009). Ultimately, the weak civic capacity of pastoral communities in the HoA means that these groups ‘lack the means to hold the powerful to account, and too often their rights are not addressed relative to the rest of the population’ (Oxfam 2008/7: 1)

5.5.3 Cross-border identities

For centuries pastoralists have ignored national borders and have engaged in activities, such as transhumance, characterized by high levels of trans-border movement. The cross-border identities of many pastoralist groups and their cross-border political and economic activities are seen to contribute to their marginal and politically vulnerable status (Oxfam 2008; Markakis 2004) For example, pastoralists are often accused of having divided loyalties, especially when such accusations can be used to suit other political interests. In addition, their disregard for state borders, their long-standing struggle to make their voices heard and their negative experience with unresponsive and unaccountable formal institutions have not helped in developing ‘a robust sense of nationality and citizenship’ among those groups (Markakis 2004: 23).

5.5.4 Pastoralism misunderstood

The protracted isolation and lack of representation of pastoralists within the national political arena is also due to deeply rooted misconceptions of pastoralism among national decision-makers. The chronic vulnerability of pastoralists in the HoA has often been perceived as an indicator that pastoralist systems and livelihoods are ultimately unsustainable. Pastoralism is often seen as an outdated way of living and a form of land use which is unviable and even irrational (HPG 2006; Oxfam 2008). Decades of inappropriate and biased national policies have contributed to pastoralists’ increased vulnerability: governments have often encouraged pastoralist groups to settle and engage in agriculture, promoted private land ownership over communal land ownership in pastoral zones, or assigned fixed grazing lands (Oxfam 2008). Over the past two decades there has been a profound change in thinking around pastoralist issues within international policy circles, academia and national and international NGOs (Morton 2008). Rather than viewing pastoralism as an outdated and unsustainable livelihoods system, there is now consensus that pastoralism is viable and sustainable. Numerous initiatives on the ground, studies and advocacy activities stress the importance of supporting the adaptive skills of pastoralists and point to the need to implement flexible dry land management strategies (WISP 2008). However, this shift in thinking has yet to fully reach national governments and the negative image of pastoralism has yet to be fully dispelled among national policy-makers (Morton 2008; WISP 2008).

5.6 The impact of political marginalization on pastoralist societies

The main effects that centuries of marginalization have had on pastoral livelihoods and social systems are outlined below:

5.6.1 Weakened access to productive assets

The access and use of an extensive area of land coupled with high levels of mobility are ‘the double imperative of pastoralists’ mode of production’ (Markakis 2004: 5). Pastoralists need seasonally varied grazing lands and water sources for their different livestock species. Freedom of movement over large areas is a crucial element of the pastoralists’ resource management system in the dry lands. Land issues, including use, access and property rights, are a well-known determinant of pastoralists’ vulnerability (Markakis 2004; Morton 2008; Helland 2006). As discussed above, formal institutions have systematically failed to recognize pastoralists’ rights to land. For example in Kenya ‘land tenure is based on English property law, which does not recognize the communal system as understood and practiced by pastoralists’ (Markakis 2004: 22). The pastoral areas are either ignored or very superficially treated’ (Helland 2006: 2). The ongoing appropriation of land for commercial, tourist, environmental and conservation projects, in many cases without consultation or even communication with pastoralists living in the area, has deprived these groups of a key productive asset and has often rendered pastoralism unsustainable. Many pastoralist groups have been unable to defend their land rights, and as a result many have dropped out of pastoralism or have been forced to migrate.

In addition to difficulties in accessing productive assets, access to markets – a precondition for the growth and efficiency of livestock production – is another challenge for pastoral communities in the Kenya and Africa as a whole. For example, cross-border livestock trade has been a vital market for pastoral communities for centuries. However, adverse policy decisions and a lack of government support and regulation are among the key factors that significantly restrict pastoralists’ ability to engage effectively in cross-border trade. (HPG 2009).

5.6.2 Weakened access to basic services

Pastoral areas have long been neglected by central governments in the provision of basic services such as health and education. In the HoA education participation rates among pastoralists are lower than national averages (Trench et al 2007). In Kenya, primary school enrolment in Central province is above 90%, while in Northern Eastern province, where the majority of pastoralist communities live, the rate is just 20% (Markakis 2004). In Ethiopia, while the national average gross enrolment at primary level is 64%, in the Afar and Somali pastoral regions the figure drops to 14% and 15% respectively. A similar disparity can be observed in relation to health statistics. Lack of education among pastoralist communities is a key determinant of political marginalization as it significantly reduces their ability to engage in advocacy activities and ‘to understand and speak out for their rights’ (Oxfam 2008: 15).

5.6.3 Increased dependence on aid

In the last few decades, droughts in the HoA have triggered widespread and severe livelihoods crises affecting millions of pastoralists. For example, the increased frequency and severity of droughts in Kenya is leaving pastoralists increasingly exposed to shocks as the time needed to rebuild herds (15–20 years) is longer than the intervals between the occurrence of drought (Longley and Wekesa 2008). Unable to recover, pastoralists become trapped in a downward spiral of vulnerability and destitution and are increasingly dependent on international aid. Their dependency on relief assistance however can also be seen as related to ‘years of neglect and misunderstanding by central governments’ (Grahn 2008: 2). Rather than addressing pastoralists’ vulnerabilities with social protection mechanisms such as safety nets or compensatory protection, national governments can ‘get away with the neglect (of pastoralists areas) in the knowledge that the international community will step in as a guarantor of last resort of the lives of the very poorest’. (HPG 2009).

5.6.4 Unending food crises

Food insecurity and high levels of malnutrition plague pastoral areas in the HoA. The Neo-Malthusian arguments that dominated theory until the early 1980s, and which understood food crises as the inevitable result of over-population or natural calamities, have long been challenged. Some scientists have pointed to the need to understand food crises as long-drawn-out political processes (de Waal 1989; Rangasami 1985; Sen 1989; Keen 1994). A focus on the process that leads to malnutrition and eventually in starvation is especially useful as it helps to focus analysis on the reasons why these crises happen. There is evidence that food crises occur even in times of plenty, and that people starve because they lack the political power to secure access to an adequate amount of food. Sen argued that ‘starvation is the characteristic of some people not having enough to eat. It is not the characteristic of there not being enough to eat’ (Sen 1981: 1). The political, social and economic marginalization of pastoralist groups is a primary cause of the food crises that recurrently engulf pastoral areas in the HoA. (HPG 2009).

5.6.5 Increased vulnerability to Conflict

Competition for scarce natural resources is widely understood to be a primary cause of conflict in the area and is in part related to the inability of pastoralists to get their land rights. Competition for scarce resources is also exacerbated by climate change. In addition to loss of grazing land to irrigation schemes, conservation projects, and natural reserves and so on, trends in land use also indicate a shift towards converting rangelands to croplands. In some areas in the region these trends are alarming. (HPG 2009).

Loss of communal grazing land to farming or environmental degradation has fuelled conflicts in a number of pastoral areas in Kenya. The competition for scarce resources with the neighboring clans, for example the Pokot and the Samburu, has led to conflict between the two, with raids and counter-raids a regular feature. ‘The lack of attention to the needs of pastoral producers has created a highly volatile security situation and a continued need for food security emergency interventions in the area’ (Helland 2006:132).

Other reasons for vulnerability of pastoralists to conflict is the presence of weak states with low capacity. (HPG 2009). All this together with marginalization makes conflict inevitable in northern Kenya.

5.6.6 Increased cross-border conflict

Tensions and violent conflict have long affected pastoral areas in the east Africa and the horn of Africa in general. Pastoralists are involved in violent conflict at different levels, ranging from cattle raiding, conflicts over natural resources and political rebellion and secessionist movements (Markakis 2004) in (HPG 2009). For example, droughts often spark or escalate conflicts over natural resources. Pastoral groups move over larger tracts of land in search of available grazing and water sources. This movement often leads to fierce competition over scarce resources, and in many cases it becomes a source of tension or sparks conflict between different communities, both nomadic and settled. For example, usually the Pokot only use about three-quarters of their territory to avoid clashing with the neighboring Karamajong groups in Kenya and Uganda. However, during drought periods they are forced to take the risk and rely quite heavily on the contested areas (Abdulrahman 2006).

Cattle raiding have been another source of conflict for centuries, but in recent years the intensity and frequency of cattle raiding have intensified. In the past, cattle raiding 'was a communal venture, organized and sanctioned by community leaders whose goal was to ensure optimal size of the group' (Markakis 2004: 26). However, this customary 'communal venture', traditionally carried out with spears and bows, has increasingly been replaced by a new form of gang raiding, carried out with modern weapons and as a lucrative source of income (Markakis 2004; Abdulrahman 2006). In December 2008, the media in Kenya reported an increase in the number of pastoralists killed in cross-border cattle raids in the Kenya/Uganda, Kenya/Sudan and Kenya/Ethiopia borders (Pastoralists Voices 12). Since then the figures seem to go higher and even higher.

Since the second half of the last century pastoralists have also been involved in larger conflicts in the region and many have joined armed opposition groups. Much as there have been conflicts involving just Kenyan pastoralists .it's important to note that in some occasions there have been cross border conflicts between Kenyan and Ethiopian pastoralists.(Markakis 2004).

Recurrent tensions and violent strife in pastoral areas negatively affect the well-being of pastoral communities, destroy the social wellbeing and cause death and much suffering. In addition, widespread conflicts in the region further contribute to pastoralists' vulnerability. (HPG 2009).

5.7 Livelihood strategies for pastoralists

5.7.1 Mobility

It's of great importance to emphasize that due to the increasing vulnerability of pastoral groups, mobility has been for many years a livelihood strategy for the pastoralists in Turkana, Pokot and Samburu. The movement of livestock and herders often transcends national borders and pastoralist groups across the region depend on the same communal pool of natural resources. Endemic conflict represents one major obstacle to the free movement of pastoralists and their livestock, and therefore greatly contributes to pastoralists' chronic vulnerability in the region. (HPG 2009).

Conflicts and tension in the HoA are mainly concentrated across borders. There is growing consensus that conflict-resolution and peace-building efforts are urgently needed, and that, in order to be effective and lasting, these efforts need to have a regional focus (Pastoral Voices 9; Adan and Pkalya 2006). For example, the disarmament of pastoral communities has been the primary response of some governments to the growing problem of violent conflict in pastoral zones. As noted by the chair of the Kenya Pastoralist Week, 'disarmament cannot be implemented in one country alone; it has to be a regional initiative to be effective' (Pastoral Voices 9). The Conflict Early Warning and Response Mechanism (CEWARN) promoted by the Intergovernmental Authority on Development (IGAD) has a regional focus. Through Field Monitors located in different areas, CEWARN observes cross-border and internal pastoral conflicts, and provides information related to potentially violent conflicts, their outbreak and escalation. In addition to their reporting tasks, Field Monitors coordinate their efforts, liaise with local administrations and communities within and across borders to avert an impending crisis and promote and participate in peace initiatives. (HPG 2009:56).

For example in January 2007, the CEWARN Field Monitor was notified by an International Rescue Committee Officer from Moroto district in Uganda of an impending raid from the Matheniko warriors. The CEWARN Field Monitor passed the information onto the Pokot local leaders who organized and prepared themselves for the attack. When the Matheniko warriors came and realized that the Pokot warriors had organized themselves they decided not to go ahead with the raid.⁸ In January 2006, the Turkana warriors of Kenya approached the

CEWARN Field Monitor in the area because they were experiencing a serious drought and had no water and pasture for their animals. They wanted to reconcile with the Dodoth group in Uganda, to share water and pasture. After reaching a peace agreement, the Turkana and the Dodoth started to engage in cross-border trade, mainly exchanging livestock for cereals, which greatly benefited the Turkana. (HPG 2009:59).

5.7.2 Cross-border livestock trade

Pastoralists have for centuries traded in livestock across borders (Little 2007). Cross-border livestock trade contributes to the countries economy and the fact that livestock is commodity that can be moved from one area to another makes this kind of trading even more special. (Little 2005).

Kenya is currently the main destination of cross- border trade in the HoA: ‘the markets at Mandera and Moyale are supplied from the Somali and Borana regions in Ethiopia, and the Garissa market from Lower Juba in Somalia. Today, cross- border livestock trade is still a vibrant, though an unofficial, activity. According to Little (2007), more than 95% of the regional trade in eastern Africa is carried out via unofficial channels. Approximately 26% of Kenya’s meat consumption comes from cross-border trade (Markakis 2004). While cross-border trade carries huge potential for meeting national, regional and even international demands for livestock and contributing to food security in the region, governments in the HoA have often adopted a hostile and punitive attitude towards this specific trade. (HPG 2009).

The above discussion shows clearly that pastoralism as a system is greatly vulnerable to climate change and conflict. There is therefore need for more emphasis to be placed on adaptation strategies.

5.8. Climate change, conflict and its impact on human security

The last part of this paper will look at how climate change and conflict work hand in hand to impact on human rights entitlements. Human rights has been previously looked at through different lenses. Such as economic, geographical and developmental. It has in the past become

an oversight for researchers and policy makers dealing with climate change. The IPCC in its Fifth assessment report has recognised that it's now evident that the global climate systems are warming up as a result of greenhouse gas emissions. The important question is: How is climate change affecting the basic right of people to sustain their livelihoods across the planet? This question will be answered with a keen interest in the situation in Northern Kenya.

Generally climate change may result in sea level rise, leading to extreme weather conditions such as flooding, drought and unpredictable seasons. Climate change has a great impact on food security, it can lead to water shortages and where there's is flooding it could result in vector borne diseases which can eventually lead to loss of lives.

Due to climate change and recurring conflicts in Northern Kenya especially, people lose the right to access to safe and adequate food and water, and the right to information, justice, security and culture. The right to livelihoods and subsistence is enshrined in in the United Nations Declaration of Human Rights in Article 25. This provides that "Everyone has the right to a standard of living adequate for the health and wellbeing of himself and his family, including food, clothing, housing, and medical care and necessary social services." This provision makes it very clear that it is wrong to deprive people of their livelihoods.

In 2008, the United Nations Human Rights council mentioned that impacts related to climate change poses an immediate and far reaching threat to people and communities around the world. As a result of this the Office of the United Nations High Commissioner introduced a study on the relationship between human rights and climate change and in 2009 a subsequent resolution was introduced and it basically indicated that "climate change related impacts have a range of implications, both direct and indirect ,for the effective enjoyment of human rights". The impacts of climate change are predicted to be problematic, one is because it's predicted that these impacts will be life changing, it will be far beyond any problem that the international community has yet confronted. The Global average temperature is predicted to increase by 1.8 to 6.4 degrees centigrade. This will mostly increase the severity of droughts, land degradation, and desertification, the intensity of floods and tropical cyclones, the incidence of malaria and heat related mortality, and decrease water availability, crop yield and food security. Another important factor is the fact that the distribution of climatic impacts is uneven .some regions will be more affected than others. Among these are Africa because of the low adaptive capacity and low projected climate change impacts, the Arctic, because of the impacts of high rates of projected warming on natural systems and human communities,

small islands where there is high exposure of population and infrastructure to projected climatic change impacts: Asian and African mega deltas, due to large populations and high exposure to sea level rise, storm surges and river flooding. These provide basis through which climate change impacts or human rights should be explored. (Lankford et al 2011:11).

As mentioned before climate change will have harmful effects on human beings. And those that are mostly disadvantaged will suffer the most. Climate change will result in flooding, it will lead to heat stress, it will bring with it food insecurity and the flooding will result in water-borne and vector-borne diseases. Climate change has over the years become an important subject and it has been viewed from many perspectives. The stern review discusses the cost –benefit analysis (Stern 2007) and goes ahead to compare the costs and benefits associated with anthropogenic climate change with the costs and any benefits of a programme for combating climate change. And according to Stern, there is need for a policy that supports mitigation and adaptation. The costs incurred in adaptation and mitigation would be high but the costs of ignoring climate change would even be much higher. (Lankford 2011).

Another perspective that has been adopted over the years looks at climate change and its impact on human security (O'Brien 2006). The High Representative and the European commission to the European council issued a statement on climate change and internal security, and they argued that climate change is a "threat multiplier which exacerbates existing trends, tension and instability" under this perspective, climate change will bring about different kinds of insecurities. These are for instance tension that is brought about by scarcity of resources, conflicts over energy sources, land loss and border disputes, conflicts that are a result of migration and tension between those whose emissions caused climate change and those who will suffer the consequences of climate change. The impact of climate change on human rights is another perspective that should be given more attention. (Lankford et al 1986).

Principle 1 of the 1972 Stockholm Declaration of the United Nations Conference on the Human Environment declares that 'man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generation. Human rights give us entitlements but as stated above we also have a duty. (Lankford, 2011).

On November 14, 2007, a conference of OASIS members adopted the Male Declaration on Human Dimension of Global Climate Change. This also invoked the fundamental right to an

environment capable of supporting human society and the full enjoyment of human rights and it expresses concern that ‘climate change has clear and immediate implications for the full enjoyment of human rights including inter alia the Right to life, the right to take part in cultural life, the right to use and enjoy property, the right to food and the right to the highest attainable standard of physical and mental health. (From http://www.ciel.org/Publications/Male_Declaration_Nov07.Pdf).

The Human Rights Council of the United Nations has since passed a resolution finding that ‘Climate change poses an immediate far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights. (Shue 1996).

Based on the above provisions it’s important to say therefore that climate change jeopardizes some key human rights. It’s of great importance to have a human rights centered analysis of the impacts of climate change .Having human rights based analysis will help understand the kind of action that should be taken and who to bear costs for combating climate change.

5.8.1 The nature of Human rights

The concept of human rights has several components. One of these is the fact that human rights are grounded on the basis of humanity. Human rights represent moral thresholds and human rights represents respect for each and every individual and finally human rights take general priority over other values. (Caney 2010).

Humanity. Human rights refer to those rights that persons have by the virtue of being human. Hart (1985) distinguishes between ‘special rights’ and ‘general rights’. According to him, special rights are rights that persons have by virtue of some action that they or some other party have performed. Or those rights that are given to person by virtue of having a special relationship. General rights on the other hand are rights that persons have by virtue of their humanity, and not because of the nation or state into which they were born or any actions that they have performed. They are rights that persons are entitled to independent of any social convention or social practice. (Caney 2010).

Moral thresholds: Human rights represent moral thresholds below which people should not fall. They represent the most basic moral standards to which persons are entitled. Basic rights are the morality of the depths, they specify the lines beneath which no one is allowed to sink. (Caney 2010).

Universal protection. Human rights represent the entitlements of each and every individual to these basic minimum standards.

Article 1 of the Universal Declaration of Human Rights (1948) states that “all human beings are born free and equal in dignity and rights”.

Lexical priority. Human rights should take priority over moral values, such as increasing efficiency or promoting happiness. They constrain the pursuit of other moral and political ideals and if there is a clash between not violating human rights on the other hand and promoting welfare on the other, then the former should take priority. (Caney 2010).

5.9 Climate change and its direct impact on Human Rights

This part will look at how climate change can be linked to human rights. Climate changes jeopardizes some key human rights. These are;

- The right to life.
- The human right to health.
- The human right to subsistence.
- The right to adequate food.
- The right to water.
- The right to adequate housing.

5.9.1 The right to life

According to the International Covenant on Civil and political Rights, 1976, Article 6.1, every person has a human right not to be deprived of his life. Climate change is projected to result in an increased frequency of severe weather events, such as tornados, hurricanes, storm surges and floods. These can directly lead to direct loss of lives. Storm surges can also have a devastating effect on people.in Bangladesh, storm-surge has caused a very high mortality in the coastal population. For example, (at least 225,000 in November 1970 and 138,000 in April 1991) the highest mortality rates were registered among the old and weak. Land that is subject to flooding and Bangladesh having approximately 15 % land area that is capable of flooding, is occupied by people living a marginal existence with few options or resources for adaptation (McClean and Tsyban 2001) Climate change will produce flooding and landslides that can be

devastating. The Fourth Assessment Report of the IPCC reports that in 1999, 30,000 people died from storms followed by floods and landslides in Venezuela. In 2000/2001 1,813 died in floods in Mozambique (Sofia et al 2005). These examples just show examples of extreme weather events that has led to loss of lives in the past and these can also occur in the future. Heat waves will also lead to deaths. A Five day heat wave in Chicago in 1995 led to at least 700 extra deaths. (Patz et al 2000) the heat wave in Western Europe in 2003 resulted in deaths as a result of respiratory ,cardiovascular ,and cerebrovascular problems that are brought about by the heat wave. These are just more examples that shows that climate change can directly lead to loss of lives.

The right to life is protected by the ICRC. The CRC and three regional human rights treaties: The European and the American Conventions and the African Charter. The Human Rights Committee commented on Article 6 of the ICCPR and emphasized that the ‘inherent right to life’ cannot be interpreted in a restrictive manner and that the protection of this right requires states to take positive measures. (Lankford et al 2011:12).

As mentioned before, Climate change has direct implications for the right to life. In its January 2009 report on climate change and human rights, the OHCHR states, on the basis of the 2007 IPCC assessment stated that a number of observed and projected effects of climate change will pose direct and indirect threats to human lives. IPCC projected with huge confidence an increase if people suffering from death, disease and injury from heat waves floods, storms, fires and droughts. Climate change will also affect the right to life through an increase in hunger and malnutrition and related disorders impacting on child growth and development. Climate change will exacerbate weather-related disasters which already have devastating effects on people and their enjoyment to the right to life, the most affected will be the people in the developing world. an example being an estimated 262 million people who were affected by climate disasters annually from 2000 to 2004, of whom over 98 percent live in developing countries (Lankford 2011). Climate change has also been recognized to pose a threat to international peace and security. Climate change by redrawing the maps of water availability, food security, disease prevalence, population distribution and coastal boundaries, has the potential to exacerbate insecurity and violent conflict on a potentially large scale. (Brown 2009).

In their December 2005 petition, to the Inter-American Commission on Human Rights (IACHR), the Inuit described the effects of climate change on their right to life saying, changes in in ice and snow jeopardize individual Inuit lives, it affects the already critical food

sources and the unpredictable weather makes travel more dangerous at all times of the year. (Lankford 2011:13).

Based on the above discussion, it's clear that climate change has direct impact on the right to life. The unpredictable weather can also lead to delayed rains and this will bring with it severe consequences and these will be felt greatly by people in Africa, due to the fact that the majority depend on farming for their livelihoods. Food insecurity might directly lead to hunger and malnutrition and this is what is apparent in Northern Kenya. The delayed rains have led to loss of livestock and failed agriculture and therefore resulting in hunger and death. Diseases that are directly linked to conflict and climate change like malnutrition and deadly sexually transmitted diseases that are a result of migration is another evidence of how this right has been violated.

5.9.2 The right to health.

The ICESCR recognizes the right to the highest attainable standard of physical and mental health. The state parties to this covenant recognize the right of everyone to attain the highest attainable standard of physical and mental health and the steps that shall be taken by state parties to achieve this rights are; The provision for the reduction of the still-birth rate and of infant mortality and for the healthy development of the child, the improvement of all aspects of environmental and industrial hygiene, the prevention, treatment and control of epidemic, endemic, occupational and other diseases and finally the creation of condition which would assure to all, medical services and medical attention in the event of sickness (Article 12 of the ICESCR). The CESCR considers this right very important for the ability to enjoy the other fundamental rights. This right includes appropriate healthcare, access to safe and portable water, adequate sanitation, an adequate supply of safe food, nutrition and housing, healthy occupational and environmental conditions and access to health/related education and information. These are considered the basic determinants of health which according to WHO (World health Organization) climate change will place at risk. (WHO 2008).

The UNFCCC (2007) defines adverse effects of climate change to include significant impacts on human health and welfare and it requires parties to take health impacts into account in relevant social, economic and environmental policies. The CRC provides that state parties should take appropriate measures to combat disease and malnutrition through the provision of

adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks or environmental pollution.(Lankford 2011:16).

Climate change is expected to have a significant impact on human health. It is projected that climate change will increase malnutrition and the number of people from disease and injury from heat waves, floods, storms, fires and droughts etc. The IPCC predicts that those who will suffer the most are people from low income countries. Those that are at a greater risk are the urban poor, the elderly and children, traditional societies, subsistence farmers and coastal populations. Climate change is projected to affect the health status of millions of people. This will be through increased malnutrition, increased disease and injury due to extreme weather events and increased burden of diarrhoeal, cardio-respiratory and infectious diseases. Global warming may also affect the spread of malaria and other vector borne diseases in some parts of the world. Overall, the negative health effects will disproportionately be felt in sub-Saharan Africa, South Asia and Middle East. The Inuit have described how climate change is already affecting their ability to enjoy this right. As weather conditions change, the fish and game on which the Inuit rely on disappear, this affects their nutrition, new diseases come up, the quality and quantity of water for drinking and daily use decreases, and their mental health suffers because of the diminished quality of their lives. (Lankford 2011:16).

There was strong evidence that this right has been violated in Turkana, Pokot and Samburu. Malnutrition was evident, children having one meal a day due to poverty and starvation was reported. Some of the diseases that were reported to be rampant in the area are Kwashiorkor, Marasmus, Malaria, HIV/Aids. Among others. The lack of enough medical facilities makes it even harder for these children to survive and this can be the reason for increased child mortality rates in the area.

5.9.3 The right to water

Water is an essential commodity that is necessary for survival, it's not a right standing on its own but it's linked to other human rights such as the right to an adequate standard of living, the right to the highest sustainable standard of health and the right to adequate housing and adequate food. Climate change has been projected to affect the availability of water. The Stern review records that even 1 degree Celsius rise in temperature will result in the disappearance of various Himalayan glaciers threatening water shortages for a quarter of China's population and hundreds of millions of Indians.(Stern 2006).The OHCHR report on climate change and

Human rights relies on the 2007 IPCC assessment to state that loss of glaciers and reductions in snow cover are projected to increase and to negatively affect water availability for more than one-sixth of the world's population supplied by melt water from mountain ranges. Water extremes such as drought and flooding will also impact on water supplies. Climate change will thus exacerbate existing stresses on water resources and compound the problem of access of safe drinking water, currently denied to an estimated 1.1 billion people globally and a major cause of morbidity and disease. Article 4 of the UNFCCC provides that states to cooperate in the preparation for adaptation to the impacts of climate change, develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture. (Lankford et al 2011:16-17).

Water is a very essential commodity and it would be almost impossible to pull through life without it. Water wars may arise due to its scarcity and people wanting to maximise the use of the remaining resource. Failure to do this can lead to disagreements and on extreme situations, even armed conflicts.

Lake Turkana was for many years, the main water source for pastoralists surrounding the Turkana area. This has however changed as the levels of the lake have increasingly been affected by droughts and even though this water would be enough to share, the Turkana people guard it and other tribes are not allowed access. The existence of weak institutions has also made the problem a political issue. The majority in the area have dug up boreholes and these also dry up eventually during the dry seasons. This has resulted in deprivation of livelihood strategies as the local communities cannot practise crop farming due to unpredictable rains and no water to support irrigation schemes. The lack of enough water in the area and the existing tribal conflict gives enough evidence that conflict is inevitable where this resource is scarce.

5.9.4 The right to adequate housing

The right to adequate housing is protected by a range of international and regional human rights instruments. Article 11 of the ICESCR and it has been interpreted by the CESCR as 'the right to live somewhere in security, in peace and dignity. It also includes security of tenure, protection against forced eviction, availability of services, materials, facilities and infrastructure, affordability, habitability, accessibility, location and cultural adequacy.

Climate change is likely to have a great impact on the right to housing. The estimates of the number of people that are most likely to be displaced by climate change range from 50 to 250 million by the year 2050. Migration within and beyond borders will be the last resort for many vulnerable communities. The International Organization for migration has observed that the ability to migrate is a function of mobility as well as resources, both financial and social. This means that the people that are most vulnerable to climate change will not be most likely to migrate. The inability to move away from the negative effects of climate change, whether due to poverty, insecurity, disability, ill health or other factors, will lead to the right to adequate housing being greatly threatened. (Brown 2008). The end result being overcrowding and so poor housing or even the development of slum areas.

According to the OHCHR report of 2009, human rights guarantees in the context of climate change include, adequate protection of housing from weather hazards (habitability of housing, access to housing away from hazardous zones, access to shelter and disaster preparedness in cases of displacement caused by extreme weather events, protection of communities that are relocated away from hazardous zones, including protection against forced eviction without appropriate forms of legal or other protection, including adequate consultation with affected people (Lankford 2011).

The Turkana, Pokot and the Samburu are pastoralists and as such live in temporary homes due to the fact that they are nomadic. The respondents when asked if they have permanent homes, the majority mentioned that they had lost their homes due to clashes and attempts for them to reclaim their homes have always led to fresh clashes. The respondents mentioned that they have temporary title deeds and pursuit for help from local leaders had not been fruitful, as such they are forced to live in temporary plastic houses which are not safe. The women and children have been affected greatly by this as some women get raped while their husbands and sons are away looking for pastures for their livestock. Children have had to drop out of school as they cannot keep up with the long distances they have to walk to get to school.

5.9.5 The right to adequate food

The term food security has been revised many times since the phrase's inception in the late 1970s. The most widely accepted and authoritative definition is the one agreed upon during the World Food Summit in 1996: 'Food security exists when all people, at all times, have physical and economic access to safe and nutritious food which meets their dietary needs and

food preferences for an active and healthy life'. (FAO 1996, 1). To achieve food security all four components must be met. That is: availability, stability, accessibility and utilization. (FAO 2007b).

Climate change will most likely bring with it climate variability. Drought affected areas are most likely to increase in extent. (IPCC 2007a). Several models predict that the proportion of the land surface in extreme drought will increase globally by the factor of 10 to 30 or from 1-3 percent today to 30 percent by 2090. (Burke et al 2006). Drought affects rain fed agricultural production and water supply for domestic, industrial and agricultural purposes. Droughts impact livestock keeping. It's possible to say that some arid and semi-arid and sub humid regions of the globe have suffered from more, more intense and multi-annual droughts. (Kundzewics et al 2007). A meteorological drought refers to reduced precipitation, a hydrological drought refers to reduced river flows and reduced water levels in rivers, lakes and groundwater. Agricultural drought means lower soil moisture. With the expected increase in area affected by drought, it is likely that water stress in semi-arid and land in low latitudes as well as in mid-latitude continental interiors in summer will be more widespread. (IPCC 2007a).

The ICESR includes the right to food as an element of the right to an adequate standard of living. The ICESR has argued that the right to food is inherent to the fundamental to the inherent dignity of the human person and this is important for the fulfilment of other rights that are enshrined in the international bill of rights. It interprets the right to adequate food as encompassing both availability of and accessibility of food and has recognised the interdependence between the environment and the right to food, the right to food requires the adoption of appropriate economic, environmental and social policies. (Lankford 2011:14). Climate change and conflict interfere with the right to food. Due to droughts people migrate and settle in areas that are overpopulated and therefore can no longer depend on farming for food. The majority will depend on aid programmes which sometimes is not forthcoming.

Conflict, drought, poverty, marginalisation, overpopulation among other factors are a direct cause of food insecurity in the area. For the families to be food secure they need both protein foods, carbohydrate and protein sources and they did not have this. The majority drink just milk and those who have maize eat 'Ugali' almost every day. With a low income and almost no income at all for the majority, the ability to meet the daily required dietary needs is almost

impossible. This affects the growth of children and also causes malnutrition which if extreme can lead to death.

To conclude, global warming in general interferes with the right to food water and housing. Global warming interferes with the hydrology of an area or a region.as precipitation changes, weather becomes variable and this can result into extreme weather events. This has a great impact on livelihoods. Reduced precipitation leads to reduced water availability. Surface water as well as ground water levels are affected and this directly interferes with the right to water. Precipitation may also result in floods and this also directly interferes with the right to housing as people are forced to abandon their homes and seek for better places to settle. Extreme weather conditions have a great impact on the right to food.Aridity and flooding is not good for agriculture, as it can lead to possible desertification and soil degradation. Decreased rainfall is most likely to lead to decreasing yields. Flooding on the other hand can destroy farming plots, wash away planted seeds and so affect expected harvest. Extreme weather conditions affect livestock keeping leading to reduced milk and meat production. This consequently affects the right to food.

Climate adaptation and mitigation policies can potentially threaten the right to water, food and housing. This is mainly due to the land use changes involved. The emphasis on afforestation and a shift from pastoralism to crop farming plus increasing emphasis on food production for export can and has led to food insecurity. Such policies bring along changes in land use which directly threatens land ownership and so interfering with food security and people's livelihoods. In dry and arid zones, irrigation is mandatory for crop farming. Irrigation may lead to reduction on water available and this finally affects the right to water. The need to farm in large tracts of land may lead to forceful eviction and thus interfering with the people's right to housing. However such investments can also be looked at positively as it can provide employment to people to work on farms thus enhancing their lives.

6. Summary

The main objective of this study was to establish the links between climate change and conflict and how both factors affect the livelihoods of pastoralists in Northern Kenya.

The final part of this work briefly looks into whether these pastoral communities and those that live in the conflicting areas experience any rights violations due to both climate change

and conflict. Based on analyzed data, the frequency of climate change is increasing, there is extreme frequent and gradual change and this has great impacts on crop production and crop rearing. However even with the extreme weather changes that the people of northern Kenya have over the years found ways to cope. The local coping mechanisms are such as saving, diversification from cattle keeping to goat and camel keeping, selling wood, mobility, social interconnectedness and borrowing of credit.

Coping options aimed at reducing vulnerability include adaptive livelihood options such as Small scale trading, irrigation, firewood and charcoal burning. It was observed in the study areas that pastoralism is changing from nomadism to agro-pastoralism or semi-permanent settlements (HPG 2009). There is also a general change in herd composition with a leaning towards browsers (goats and camels) and a move away from grazers (Cattle). The pastoralist communities in the study areas have embraced modern formal education and acquisition of skills that can enable them engage in other livelihood support opportunities. However, it needs to be pointed out that the frequency of conflict among pastoralists is increasing due to pressure on natural resource base due to the degradation of such resources

Some of the institutional coping mechanisms are emergency aid, credit services which according to the respondents is not always forthcoming, water distribution and the raising of awareness on saving and use of technology. These coping mechanisms are however not sufficient to address all the challenges that these people face on day to day basis.

These coping mechanisms are not sufficient to address the challenges at hand, all the societies in this area are vulnerable and this affects mostly the poor, the landless, those that are unemployed, children, women, pastoralists and large sized households. The majority in this area are unemployed, so lack of income, water scarcity, unaffordability and unavailability of inputs to support diversification, exacerbate the society's vulnerability.(Omolo 2009).

The meteorological data indicated that there has been an increase in temperatures over the years and there was also evidence that precipitation shows a decreasing trend. Even though there has been instances of rain, the respondents feel this is not good enough as they never know when it will rain, the rains have become so unpredictable and this has disrupted their farming activities that they practiced before. Irrigation is not an option as they lack inputs to support this. According to O'Brien (2004) districts with higher irrigation rates are expected to have a higher capacity to adapt to climate change and other economic shocks.

The vulnerability of the poor to climate change impacts manifest itself through maladaptation. By way of access of housing, insurance, mobility and migration, resource degradation that is linked to the quantity and quality of water and loss to livelihoods. This burden is borne by poor people. (Green 2011).

The combination of non-climatic stressors acting on ecosystems such as poverty, inequality, and institutional weaknesses are significant in developing countries, and affects mostly the poor in these countries. This could increase social vulnerability and lead to potential conflict under conditions of climate change. Barnett and Adger (2007) have looked closely into the relationship between climate change, human security and conflict by integrating three important aspects of research on the vulnerability of local places and social groups to climate change, on livelihoods and conflict and the role of the state in development and peacemaking.

Figure 9

6.1 The relationship between determinants of Human insecurity, conflict and climate change.

Factors affecting conflict	Processes that climate change could affect (Exacerbate).
Vulnerable livelihoods.	Climate change is likely to have widespread impacts on water availability and food security, and cause extreme events and diseases. Impacts on livelihoods will be significant amongst the population with high resource dependency, and in more environmentally and socially marginalized areas. Some climate driven impacts are long-term and chronic (declining productivity of agricultural land), while others are episodic (floods).
Poverty. (Relative/chronic/transitory)	Poverty (particularly relative deprivation) is affected by the spatial differentiation of climate impacts and the sensitivity of places

	to them. Climate change may directly increase absolute, relative and transient poverty by undermining access to natural capital. It may indirectly increase poverty through its effects on resource sectors and the ability of governments to provide social safety nets. Stresses from climate change will differently affect those made vulnerable by political –economic processes.
Weak states	The impacts of climate change are most likely to increase the costs of providing public infrastructure such as water resources and services, and may decrease government revenues, thereby decreasing government capacities to adapt and respond to climate change.
Migration	Migration, in conjunction with politically induced loss of socio-economic opportunities, may be a response of people whose livelihoods are undermined by climate change and may increase the risks of conflict in host communities.

Source: Adapted from Barnett and Adger 2011.

Though this paper has placed more emphasis on pastoral vulnerability, it’s of great importance to note that it was apparent during my field visit that women are at the back seat in talks concerning climate change, conflict and human security. Even previous researchers have not talked much about the roles of women. Women generally in Africa have a higher prevalence of HIV/AIDS than men. In Kenya alone about 80% of refugees in refugee camps are women and children. In Northern Kenya, women are underrepresented in decision making. (Omolo 2010) The majority of those that are illiterate in such remote areas are women. During conflicts, they are the ones that suffer the most because they cannot fight

back. They are raped are infected with diseases, they have no control of or ownership of resources, they therefore represent the most vulnerable of the vulnerable.

Climate vulnerability have impacts on both men and women but what should be noted is that there is variation in gender coping and adaptation strategies. Gender coping and adaptation have been increasingly weakened by the increasing climate change induced conflict. The situation of women and men in pastoral communities is not static, this is due to the fact that drought has led to changes in socio-cultural and socio economic organization of pastoral societies (Barrow and Mogaka 2007).Due to the fact that the communities lose a lot of cattle and other livestock, the women play an important role in ensuring family survival. They do this through involvement in income generating activities, like doing small businesses, marketing had crafts and selling of charcoal and firewood. During my field visit, I realized that there were a number of female headed households and according to the village chiefs this has been an increasing scenario over the past 10 years.

Women are very vulnerable to insecurity and conflict, so are young children and old people. Women are the most vulnerable because they are often responsible for their children and for the old members of the family. According to Eriksen and Lind (2005:15) raiding and killing has led to, many women losing their husbands. Those households that are led by women are more vulnerable to conflict because women have poor customary rights to land, wells and livestock. The women cannot remarry after the husband is dead due to customary and cultural reasons and these women do not get help from the husband's family. Some women are sent away from the husband's home, they move in big cities and with no education find no jobs, they are therefore forced to engage in prostitution and this leads to some of them catching dangerous diseases like HIV/Aids. This thus creates another cycle where the vulnerable become even more vulnerable.

7. Conclusion

Climate change is likely to be a driver of conflict in many livelihoods systems. These systems include pastoral production. Climate change has in general led to increased droughts and floods in different areas in Kenya and in these areas the result has been a loss of animals, displacement, and destruction of property, reduced pastures for animals, reduced crop production in areas that practice crop farming, scarcity of water and in some cases, loss of

lives. The effects of this is increased poverty and competition for the already scarce resources. This often leads to conflicts ,particularly livestock raiding, in this manner livestock raiding has been has shifted from being a cultural practice to a commercial activity and those that engage in it have criminal motives, and the use of weapons has made Turkana,Samburu and the pokot areas and the northern part of Kenya generally insecure. Such insecurity makes it hard for pastoralists to move from one area to another for pastures and so the consequence being environmental degradation through soil erosion as these pastoralists are forced to overgraze in one area. In the recent decades pastoralists have tried to diversify their livelihoods. These are however not sustainable, this is due to too limited resources and due to the fact that they opt for these new livelihood ways due to desperation. Pastoralists will be able to adapt to the current changing climate only in situations where there's the ability to tackle environmental challenges and where there's the ability for pastoralists to move from one area to another without restriction.

Though I have not paid close attention to gender issues, it's important to note that this is of great importance as it shows how both men and women adapt differently to climate change. We have seen that climate change related conflicts have left women and children more vulnerable than the males and in some cases, women have been left to be the heads of the family and this has left them even more vulnerable to conflict. Women have been left victims of poor customary rights in accessing resources.

Due to the constantly changing climate, the future of pastoralism is very uncertain. Based on the data collected from the Kenya meteorological department in Kenya together with scientific evidence, it's almost apparent that future rainfall pattern projections are not positive. This only indicates that there might be increased droughts in northern Kenya and this is not good for pastoralism. A close look at ways in which conflicts have changed in the past years helps us look at how pastoralists' livelihoods have been undermined over the years. It's important for Kenya as a country to find out ways in which pastoral vulnerability to drought can be reduced. The plan would possibly include other districts in the North that practice pastoralism that's are affected by the changing climate and are also vulnerable to conflicts. These plans should possibly coordinate the use of natural resources among all potential users to minimize the conflicts that have become so frequent and destructive between pastoralists within Kenya and across the borders of neighboring countries .It's important to set up new ways of livestock insurance, this will allow pastoralists to cope with drought and conflicts. It's also of great importance to make credit facilities accessible to poor households, this will make the more adaptable to climate change and especially hard droughts. This will allow

households to restock where they have lost livestock and to diversify their livelihoods. There's also the need to introduce capacity building among pastoralists with the hope that this might slowly reduce conflicts among them. In regards to human rights, it's important to educate the rural communities of northern Kenya on this subject. Most people that I interviewed did not seem to realize that their rights are violated during conflicts and during extreme droughts. These people will claim these rights once they know that these rights exist and are there for their protection.

8. Recommendations

It's very important to introduce livelihood intervention in the arid parts of Northern Kenya. This will protect and enhance livelihood assets, strategies and outcomes, such interventions will also lead to saving lives and resilience and will also address vulnerability (HPG 2006). There is also the need to look at peoples' problems from a new angle.

Turkana, Samburu and Pokot districts 'main problems seemed to be related to water scarcity. Lake Turkana has shown signs of drying due to continued droughts and the borehole water that they are mostly dependent on are not sufficient for both household use and for their animals. The Kenyan Government should therefore cater for these water shortages by looking for ways to maintain the existing water sources, digging more boreholes and introducing emergency water supplies where necessary. There is need to introduce storage water facilities and machines that can pump water from the boreholes. This will to some extent reduce conflict over water as we have seen that water is a contributory factor to conflict.

The main livelihood strategy in these three districts is pastoralism. We have seen that conflicts are inevitable with this kind of culture. There was also evidence of large numbers of cattle losses during extreme droughts. What can be done is encouraging pastoralists to destock when livestock prices are high, this can ensure that they do not lose a substantial amount of livestock during the droughts.

After droughts, the government should introduce feeding programmes for the remaining cows which is much better than restocking as restocking is both expensive and does not guarantee increased production as droughts are obviously unpredictable in these areas.

Feeding would possibly lead to better health for the animals and maybe increased numbers. There should also be laid more emphasis on veterinary programs for the pastoralists to help reduce the numbers of animals lost due to disease outbreaks. The pastoralists also need transport facilities that will help them transport their cows from drought stricken areas to other new areas.

Northern Kenyan has for a long time been marginalized and apart from the need for the introduction of pastoral support livelihood systems, there also the need to introduce support education services. This will allow pastoralists to develop and be equipped with crucial and important skills that will allow them not only develop adaptation strategies but will enable them take part in political processes. By doing this, they will give pastoralism anew perception and this will most likely reduce marginalization.

There is the need to promote both primary and secondary school education such pastoral areas. Based on the data collected those that had secondary education were less than 50%. This number is quite low, the old showed interest in education so there's need to introduce adult education too. Pastoralist communities need more schools and more teachers. The introduction of boarding school systems for primary and secondary education would be a great idea and this will also ensure the protection of these students during conflict.

There's need to promote capacity building activities for pastoral communities. an example would be an introduction of technical skills that might be helpful in policy making. there's need to encourage local institutions and organizations to strengthen relationships between different tribes.

To address cross border issues, there is need to introduce both peace and reconciliation initiatives. This will enable easy cross border movement which can enhance trade and access to natural resources. Peace and reconciliation can be promoted by local leaders introducing meetings and engaging in talks with one another to try and solve their issues. During these meetings, there could be introduced talks on how to better livestock trade among them.

It's also important to restrict the proliferation of arms. The availability and easy possession of arms in the area has caused a lot of destruction that comes after conflict .the Nairobi

declaration of 2000 and other protocols that have been put in place to limit possession of arms is a step in the right direction. The initial attempts to confiscate arms in Turkana and Pokot districts have not been very successful. The warriors see this confiscation as a way to make them more vulnerable to attacks by enemies. Instances of corruption have been observed where police officers have been bribed to give back confiscated arms. to succeed it's important to get an impartial third party body to supervise the confiscation of arms.

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