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Environmental conflict and national security in Kenya: Case study of Turkana community

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A research project submitted in partial fulfilment of The Degree of Master of Arts in International Conflict Management.

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DECLARATION

I declare that this research project is my original work and has not been presented for an award of Degree of Master in any other University.

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ABSTRACT

The study is about the environmental conflicts and national security in Kenya and it will focus on people from Turkana community. The study investigate if environmental issues have any impact on national security and it is guided by environmental scarcity theory by Homer Dixon. This theory adduces a wide array of empirical work linking environmental degradation with violent outcomes, and articulates a preliminary theoretical framework to explain these linkages. Homer-Dixon points out, violent outcomes are often the product of interactions between scarcity and a number of other factors, such as inequality, migration, and the functioning of social institutions. Because violence rarely is caused by scarcity alone, it has been typical for researchers to look to the factors with which it interacts as the causes. Homer-Dixon calls for a more complex and nuanced view a multivariate, non-linear and interactive view of the social and ecological world. Data was collected from primary and secondary sources. Primary data are information collected directly from the respondents through questionnaires and interview schedules. Secondary data are information collected from the previous study these information's are contained in test books, journals, magazines and research reports among others. The methodology for the study will take a qualitative approach. This allow for the voices, views, opinions and stories of participants to be heard and was facilitated through a range of qualitative interview processes and focus groups. Descriptive statistics was adopted for the analysis of data in which gathered data was analysed in form of frequency distribution and percentage

ABBREVIATIONS

ASCU   Agriculture Sector Coordinating Unit

AU   African Union

CEWARN   Conflict Early Warning and Early Response Mechanism

GoK   Government of Kenya

IBAR   Inter African Bureau for Security Studies

IGAD   Inter-Governmental Authority on Development

ISS   Institute for Security Studies

NFNP   National Food and Nutrition Policy

NRM   Natural Resource Management

OPEC   Organisation of Petroleum Exporting countries

SDB   South Durban Basin

U.S   United States

U.N   United Nations

UNEP   United Nations Environment Programme

WCED   World Commission on Environment and Development

DEDICATION

I dedicate this research project to God first, my parents and my siblings and also my friends, they are a great source of inspiration to my life.

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I wish to register my gratitude to my supervisor Dr. Anita Kiamba for effective guidance and intellectual support from the time I started my proposal until now am through with the project. I would like also to express my sincere thanks to my classmate Peter Onyango for inciting and encouraging me to take up the study, my friends Sally Mwende and Stella Bamar for motivation and support, my research assistant for his tireless efforts in data collection and translation. I also salute all the scholars who had published their research which are related to my study which were of much help, not forgetting my employer for giving me time to do my research project and attending classes.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Background to the study

The "environment and security" movement, if it can be called that, was born from a deepening public concern in the 1960s and 1970s over environmental degradation. This growing environmental awareness resonated against a nerve-wracking backdrop of Cold War uncertainty. Subsequently, a series of events international meetings on the one hand and man-made environmental disasters on the other illustrated some of the important links between the environment and our security. In 1972, a United Nations conference on Human Security was convened in Stockholm under the leadership of Maurice Strong. Although the conference was rooted in the regional pollution and acid rain problems of northern Europe, it led to the creation of the United Nations Environment Programme and many other national environmental organizations. These organizations have been central to subsequent multilateral environmental cooperation and dialogue. The OPEC oil crisis in the 1970s fuelled the debate over the ecological carrying capacity of the earth as well as the political ramifications of dispute over scarce resources. Environmental degradation and the exploitation of natural resources are recognized as important drivers of violence between and within states contributing to poverty and state failure.[1]

In 1994, Robert Kaplan wrote a highly influential article, "The Coming Anarchy," that painted a bleak picture of a West African descent into endemic conflict fuelled by spiralling population

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[1] Jason Switzer and Alec Crawford of IISD for the OECD CPDC, "Managing the environment to prevent conflict and build peace: A review of research and development agency experience," February 2005.

growth, environmental degradation and easy access to arms. Based on early environment and security research, the future he portrayed was one of "disease, overpopulation, unprovoked crime, scarcity of resources, refugee migrations, the increasing erosion of nation-state independence and international borders, and the empowerment of private armies and drug cartels."[2] Kaplan's analysis of West Africa attracted a great deal of attention. Even more alarmingly, Kaplan argued this volatile and destructive mix was gaining critical mass elsewhere in the world. By arguing that the result for Northern countries might be mass inward immigration from failed developing states, he played deftly to the unspoken fears of the developed countries. However, "The Coming Anarchy" failed to give due credit to societies' capacity to adapt to environmental change, nor to the potential for international action to rein in trade in those resources used to fuel conflicts.[3] The dramatic rise in intra-state conflict in the early to mid-1990s led many academics, commentators and policy-makers to search with some urgency for an explanation; often looking for answers outside traditional models of state security. This debate has taken two major, interrelated paths. First, has been a redefinition of what we should understand by security in the post-Cold War world. Second, has been empirical research to try and discern whether and how environmental change might threaten peace.[4]

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[2] Kaplan, Robert, D. "The Coming Anarchy – how scarcity, crime, overpopulation, tribalism and disease are rapidly destroying the social fabric of our planet," *The Atlantic Monthly,* February 1994, pp. 44-76

[3] Switzer, J & Crawford, A. "*Managing the environment to prevent conflict and build peace: a review of research and development agency experience,*"
OECD/ IISD, 2005.

[4] After Dalby, S. "Security and Ecology in the age of globalisation," ECSP Report, Issue 8, Environmental Change and Security
Project, Woodrow Wilson Foundation for International Scholars, 2002.

According to Hon Professor Wangari Maathai, Nobel Laureate,'' If we did a better job of managing our resources sustainably, conflicts over them would be reduced, so, protecting the global environment is directly related to securing peace"

1.2 Statement of the research problem

Violent conflicts involving pastoralists have become widespread and increasingly severe in the Turkana Kenya. Conflicts involving pastoralists are associated with availability of small arms are widespread and of increasing concern. This study will thus provide a useful case to examine in depth factors contributing to conflict, issues and priorities for conflict prevention.

Though the pastoral areas faces many challenges the Government of Kenya (GOK) through the Economic Recovery Strategy for Wealth and Employment Creation (2003-2007)[5] has argued persuasively that the gap in human security has been the most single factor in leading to armed violent conflicts among pastoralists. Furthermore, high levels of poverty, poor social and economic infrastructure, weak institutional and regulatory frameworks coupled with environmental related problems among others, have combined to influence in a crucial way, the pastoral livelihood. Drought and famine negatively affect the main sources of pastoral livelihood i.e. pastures and water which often leads to death of livestock because pastoralists depends mainly on meat, blood and milk though they occasionally practice transhumance nomadic system that primarily depends on animal sales to purchase food mainly grains. The need to understand environmental conflict in Turkana Kenya and the role it plays in the Kenya's

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[5]Ministry of Planning and National Development, (2003)*The Economic Recovery Strategy for Wealth and Employment Creation (2003-2007),*Government of Kenya, Ministry of Planning and National Development,

national security therein calls for a study of this nature. Establishment of the nature of conflicts in Turkana Kenya and the role environmental change plays will be the basis that can be used to understand situations in other communities in Kenya and globally.

1.3 Research questions

The research questions for the study were as follows;

1. What is the nature of the relationship between environmental conflicts in Turkana Kenya and the Kenya's national security?

2. What are the theoretical and practical linkages between environmental conflicts in Turkana Kenya and Kenya's national security?

3. To what extent does environmental conflicts in these communities affect the Kenya's national security?

4. What the measures that the Kenyan government is taking towards the management of these conflicts and improving the lives of these communities?

1.4 Research objectives

The purpose of this study is to understand the role that environmental conflict issues plays and the impact it exerts on the Kenya's national security. The study also aims to make a theoretical contribution to the body of knowledge related to environmental management and governance with a particular emphasis towards a sustainable development of Turkana community.

The research objectives of the study were as follows;

 1. Examines the nature of the relationship between environmental conflicts in Turkana Kenya and the Kenya's national security.

 2. Interrogates the theoretical and practical linkages between environmental conflicts in Turkana Kenya and Kenya's national security.

3. Determine the extent to which the environmental conflicts in these communities affect the Kenya's national security.

4. Establish the measures that the Kenyan government is taking towards the management of these conflicts and improving the lives of these communities.

1.5 Literature review

1.5.1 Introduction

This chapter highlights the literature of the previous studies to be covered, where all important contributors to the issues related to the study are quoted from reference books and journals. It discuss the various discourses on the links between environmental conflicts and security. It also covered the critical review where the researcher provides divergent views which are critical to some who raised various versions related to the issues being investigated. The literature on environmental security is mainly on the debate around securitization of environment. The literature will be reviewed under the following sections;

1.5.2 The Expanding Definition of National Security

This broader view of national security reflects the fact that new global pressures now threaten the well-being and resilience of both human society and the natural environment. These pressures include population growth, increased demand for energy and materials, and competition for access to land, water, minerals, and other vital natural resources. The resulting impacts include changes in global climate and degradation of clean air and water, soil, forests, and wetlands, all of which have the potential to compromise energy security, food security, supply chain security, and other domestic and international concerns. Today the vitality of our ecosystems is already seriously threatened. According to the 2005 Millennium Ecosystem Assessment, 15 of 24 important global ecosystem services are being degraded or used unsustainably.[6] Future global ecosystems will be under even greater pressure when by 2050 global population will reach about 9 billion, some 30 percent higher than the 2000 population. Poverty alleviation and rising affluence in developing nations will inevitably increase the demand for natural resources. The boom in Asian economies is well under way, while in Africa another billion people are ready and eager for economic expansion (See Africa's economic growth).

The essence of global security is acquisition of economic well-being and social justice for all. Hence, the challenge ahead is to create global conditions that foster economic growth and human well-being in a sustainable manner. How can society address these growing social and environmental pressures in ways that sustain economic growth, assure an adequate supply of

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[6] Millennium Ecosystem Assessment. Guide to the Millennium Assessment Reports. Accessed 2005

natural resources, protect human health and safety, and avoid domestic and international conflicts?

1.5.3 Background and History of Environment and Security

The linkage between environment and security has a long history, underscored by events such as the oil embargo of 1972 that led to gas rationing around the world. Both academic and government experts have worked hard to understand how environment and security can be managed in a coordinated fashion.

The widely-known 1972 "The Limits to Growth" report by the Club Rome called attention to the risks associated with natural resource scarcities and continuing deterioration of environmental quality[7]. It pointed out connections with an array of socio-economic problems (population growth, urbanization, migration, etc.), particularly in developing countries, that could lead to security-relevant threats or even to the outbreak of violent conflicts

A decade later in "Redefining Security," Richard Ullman identified a number of environmental problems that could potentially lead to security implications. His list included earthquakes, conflicts over territory and resources, population growth, and resource scarcity, particularly oil.[8]

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[7] Meadows, D. H., J. Randers, and W.W. Behrens III.1972. The Limits to Growth. New York: Universe Books.

[8] Ullman, R. 1983. Redefining security. International Security 8:1, page 129 ff.

To avert these security implications, Ullman argued for redefinition of the threat to national security to include "disturbances and disruptions ranging from external wars to internal rebellions, from blockades and boycotts to raw material shortages and devastating ''natural'' disasters such as decimating epidemics, catastrophic floods, or massive and pervasive droughts."

The link between environment and security became more evident in the 1987 UN Report of the World Commission on Environment and Development also known as the Brundtland Commission – report, Our Common Future (UN 1987). This was the first international report to refer explicitly to the connection between environmental degradation and conflict. Norwegian Prime Minister Gro Harlem Brundtland, who chaired the Commission, strongly believed that the traditional definition of security, which relied primarily on a military response to threat, was inadequate for dealing with environmental issues that demand non-military responses.

The WCED report advanced the idea that "The whole notion of security as traditionally understood in terms of political and national threats to sovereignty must be expanded to include the growing impacts of environmental stress locally, nationally, regionally, and globally."

The Brundtland Report advanced the vision that "it is possible to construct an economically sounder and fairer future based upon policies and behavior that can secure our ecological foundation." Hence, future challenges have to be met with a new model that effectively links

policy and science in the context of basic food and energy needs, natural resource management, public health and safety, and economic development.

Beginning in the 1990s, the linkage of environment and security began to appear in high-level U.S. policy statements. The National Security Strategy is a document prepared periodically that states U.S. foreign and security policy objectives and seeks to inform the American public and policymakers worldwide of these objectives and strategies. The 1992 Strategy advanced the notion that the United States "whenever possible in concert with its allies, to achieve cooperative international solutions to key environmental challenges, assuring the sustainability and environmental security of the planet as well as growth and opportunity for all.

Public awareness of the scale and importance of environmental and security issues were further advanced by Norman Myers (1993) and Thomas Homer-Dixon (1993.) In one article Myers wrote (1993):

> 'National security is no longer about fighting forces and weaponry alone. It relates increasingly to watersheds, croplands, forests, genetic resources, climate, and other factors rarely considered by military experts and political leaders, but that taken together deserve to be viewed as equally crucial to a nation's security as military prowess'[9].

Also in 1993 the Canadian political scientist Thomas Homer-Dixon writing in Scientific American argued that environmental change could be a cause of serious national conflict. The article in turn led to a New York Times op-ed, which was widely circulated in the National Security Council, the Pentagon, the State Department, and the Central Intelligence Agency. The article

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[9] Norman Myers (1993) <u>Environmental Security: What's' New and Different</u>

prompted then Vice President Al Gore to invite him to Washington.[10] In another landmark

publication, Robert Kaplan in 1995 portrayed environment degradation and conflict over

resources (such as water) as potential causes of international conflict that can only be

controlled if the environment is made a national security issue. Kaplan called the environment

as the "national security issue of the early twenty-first century"[11] He argued that "the political

and strategic impact of surging populations, spreading disease, deforestation and soil erosion,

water depletion, air pollution and, possibly, rising sea levels in critical, overcrowded regions will

be the core foreign policy challenge from which most others ultimately emanate, arousing the

public and uniting assorted interests left over from the cold war."

1.5.4 Linking the Environment to Security

In linking the environment to security, the question to ask is, why should the world leaders shift

their focus from the more pressing needs of an imminent nuclear threat from countries like Iran

and Korea to a more subtle but equally serious threat like environmental security? The answer

lies in recognizing that the globe's life supporting eco-systems generating water, food,

medicine, air for current and future generations will be confronted with increasingly severe

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[10] Floyd, Rita, 2010. Security and the Environment. Cambridge University Press.

[11]Kaplan, R.1995. The Coming Anarchy. Atlantic Monthly. February.

instances of environmentally induced changes. Such changes will test our traditional concepts, boundaries and understanding of national security and alliance politics and if taken for granted, may lead to conflict, including violent conflict, from the global to the regional, national, local and on a human level. In already impoverished states, environmental degradation can weaken a government's capacity and legitimacy, as financial and political demands increase while economic productivity declines.

Environmental degradation thus contributes to insecurity in various ways. It can threaten traditionally defined national security in terms of human security, health conditions, or economic development. It also affects human kind and its institutions and organizations everywhere and at any time. Environmental changes resulting into scarcity will pose a great threat in terms of human movement. Typically, when people are faced with a severely degraded environment, the behaviour strategy of choice is migration.[12] In 1995, there were 25 million environmental refugees compared to 27 million traditional refugees (people fleeing political oppression, religious persecution and ethnic troubles). This number is projected to double by 2010. It is projected that when global warming takes hold, there could be as many as 200 million people overtaken by disruptions of monsoon systems and other rainfall regimes, by droughts of unprecedented severity and duration and by sea level rise and coastal flooding.[13] It is projected that there as many as 80 million considered to be semi-starving primarily due to

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[12] Speech by the Director General of UNEP at a Symposium on Environmental Security, Stable Social Order and Culture. Accessed at http://www.unep.org 7/23/008.

[13] Norman Myers (2002): Environmental Security: What's new and Different? Policy Background Paper for the University of Peace at pg. 4.

environmental factors, seven million of these have been obliged to migrate to obtain food. The Horn of Africa and Sudan are projected to have about 4 million environmental refugees.[14] With half the world's traditional refugees and at least a similar proportion of environmental refugees, Sub-Saharan Africa is set to remain the primary locus of environmental refugees in the world. This raises several issues of concern in terms of environmental security in the region. While environmental refugees arise from an environmental problem, they are bound to bring with them a myriad of political, social and economic problems. Immigrant alien's present abundant scope for popular resentment as has already been experienced in many countries in the region against the Ethiopian and Somali refugees. In a region that is already struggling with threats to perceived social cohesion and national identity, refugees can become an excuse for outbreaks of ethnic violence and civil disorder.[15]

Environmental changes resulting from population growth, depletion and pollution of resources such as fresh water supplies, degradation and depletion of biodiversity, degradation and depletion of agricultural lands, stratospheric depletion and global warming will not only contribute to the growing inequity between nations but also between individuals. This will affect human security in several ways by affecting the ability of entire communities to support themselves leading to such phenomenon as environmental refugees. While environmental scarcity alone is usually not enough to generate conflict, its interaction with other political, economic and social conditions may foster political or military conflict.[16] The challenge therefore lies in the   ability of governments in Eastern Africa to make innovative institutional

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[14] Ibid at 2
[15] Ibid at 6
[16] Nato report

arrangements and technological advances for managing the environment security challenges posed by decreased environmental security.

However, it is not just environmental scarcity that poses environmental security challenges. Resource abundance is just as likely to cause environmental insecurity as is scarcity. The Millennium Ecosystem Assessment which examines all the functions of ecosystems and the services they offer to people and nature provides an apt illustration of this. Abundance of environmental resources such as oil, mineral and gas may and very often do lead to conflicts. It can also lead to severe environmental degradation through pollution, infrastructure and corruption. Conflict, pollution, corruption and such related impacts of environmental resource abundance thus decrease environment security and thus human security.

In addition to the environmental insecurity caused by scarcity and or abundance of resources, conflict also plays an important role in contributing to environmental security problems in any given country. Violent conflict, war and displacement of people may lead to a decrease of environmental security and spiral up a vicious circle of scarcity, poverty and further conflict. In converse, the sustainable use of natural resources and joint efforts to protect the environment across national borders and social divisions can contribute to conflict prevention and peace building. For example, various forms of cross boarder water cooperation are contributing to stability and peace in regions of latent conflict. Water is an excellent illustrator of the concept of environmental security. Global water supply per person has fallen by 60% since 1950 as world population has swelled by over 150% and the world's water consumption has increased by 180% and is expected to increase by another 40% in the next two decades. During the past

century, there were more than 450 water related disputes and on 37occassions rival countries

fired shots, blown up a dam or undertaken some other form of violent action.

It is important to note however that Environmental security is not just about relative security

from environmental dangers caused by natural phenomenon but also from dangers caused by

humans. Environmental security thus covers risks from biological, chemical and nuclear

materials and those individuals who use them as weapons of mass destruction.[17]

1.6 Theoretical framework

This study is anchored in a slightly modified environmental scarcity theory as developed by

Thomas Homer-Dixon. Thomas Homer-Dixon expressed his theoretical formulation in terms of

reductions in the relative availability of renewed resources. His view holds that resource

scarcity, through a complex web of interactive social, economic and political process can lead to

violent conflicts in the developing world.[18] Theoretically, Homer's model deploys a conceptual

framework, which presents the obtaining of social reality in such a way that the casual process

linking environmental scarcity and violence conflicts falls into three main stages. These are the

origin of environmental scarcity, its socioeconomic and political consequences and the

outbreak of different forms of violent conflicts.[19] This means that in the process, resource

degradation, demographic pressure and distributional inequalities interact to create

environmental scarcity. This then creates the socio-economic effects of scarcity, which include

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[17] ibid

[18] Homer-Dixon *Environment, Scarcity, and Violence*, Princeton: Princeton University Press. 1999 xvi, 253 pp
and also 1994 'Environment, Scarcity, and Violence: Evidence from Case Studies' *International Security* 19(1)
5-40

[19] Ibid Homer-Dixon, 1999

constrained agricultural production, marginalization of less powerful groups and probably migration of these groups into ecologically sensitive areas. Thomas Homer-Dixon specifies the relationship among environmental degradation, the struggle over resources, and conflict and human insecurity. He cautions against assuming a direct relationship between degradation and conflict. Homer-Dixon identifies three sources of resource depletion and degradation: supply-induced, demand-induced, and structural scarcity. Supply-induced scarcity results from a total decrease for resource available for consumption and related to technologies and practices used in the consumption of the resource. Demand-induced scarcity results from an increase in total population and other changes in consumption patterns. The third type, structural scarcity, is caused by a 'severe imbalance in the distribution of wealth and power that results in some groups in a society getting disproportionately large slices of the resource pie, whereas others get slices that are too small to sustain their livelihoods'. Structural scarcity has been a factor in nearly every case where resource scarcity has resulted in conflict. None of these factors operates alone instead; all interact and reinforce each other in varying ways. Homer-Dixon[20] warns that 'environmental scarcity is never a sole or sufficient cause of large migrations, poverty, or violence; it always joins with other economic, political, and social factors to produce its effects' In this regard, this is a flaw or a weakness in the framework because it does not identify the specific factors that combine to produce conflict. These sources (supply, demand, and structural) can act singly or in combination to create the general condition of environmental scarcity. The interaction of these sources produces two phenomena that Homer-Dixon refers to as resource capture and ecological marginalization. Resource capture occurs

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[20] ibid

when a decrease in the quantity or quality of renewable resources coincides with population growth "to encourage powerful groups within a society to shift resource distribution in their favour. This can produce dire environmental scarcity for poorer and weaker groups whose claims to resources are opposed by these powerful elites."[21] The resource capture that occurs in pastoral areas is occasioned by a decrease in the quantity of pasture and water partly because of population increase but more so drought. Ecological marginalization occurs when population growth and unlimited pasture and water combines as cause migrations to regions that are ecologically fragile, such as steep upland slopes, areas at risk of desertification, and tropical rain forests. High population densities in these areas, combined with a lack of knowledge and capital to protect local resources, causes severe environmental damage and chronic poverty.[22] Within the context of pastoral areas, the slightly modified environmental scarcity analytically found to capture, if not explain, the intricate linkages that develop between resource scarcity as a component of environmental security and conflict. Furthermore, ethnic conflicts is replaced by conflicts in pastoral areas, because though conflicts in pastoral areas have ethnic elements they cannot be treated purely as ethnic because the driving force is not ethnicity but resources. Due to limited presence of the state pastoralists in the marginal areas arm themselves to take of their own security but also raid. In most pastoral areas where frequent prolonged drought, famine, and converging environmental trends contribute to the diminishing grazing grounds and water resources, conflicts are likely to worsen considerably as resource scarcities interact with, or exacerbate other conflict-related social variables.

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[21]Homer-Dixon, T. (1994), 'Environmental Scarcities and Violent Conflict: Evidence from Cases'. Op cit 5-40:10
[22]Ibid pp10-11.

1.7 Justification of the study

There exist only a few study on pastoral livelihood within a myriad of conflict, environmental and security including the development of cooperative mechanisms for peace building and conflict prevention.[23] Accordingly, the relationship between aspects of environmental security and is understood poorly which calls for a more systematic comprehensive assessment of the issues.

Empirical foundation for a general relationship between resource scarcity and armed conflict is indicative at best, and numerous questions regarding the assumed causal association remain unanswered. Several single-case analyses suggest that resource scarcity contribute to outbreak of organized violence, though always in interaction with exogenous conflict-promoting factors. Daniel, M.*et al* notes that 'environmental scarcity is never a sole or sufficient cause of large migrations, instead poverty or violence always joins with other economic, political, and social factors to produce its effects.[24] The methodological limitations of some of the research have undermined the credibility of the findings that seem to point to a linkage between conflict and environmental security. For instance, Hagmann[25] observes that some of these studies have come up with divergent conceptual approaches, methodologies and levels of analysis that makes a coherent and systematic presentation of the environmental

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[23] Governing Council of the United Nations Environment Programme 'Environment and Security: a Global Agenda for UNEP' Twenty-Third Session of the Governing Council/Global Ministerial Environment Forum Nairobi, 21–25 February 2005,UNEP/GC.23/INF/21

[24] Daniel, M. *et al* (2000),'The Environment and Violent Conflict:A Response to Gleditsch's Critique and Some Suggestions for Future Research' in *Environmental Change &Security Project Report,* Issue 6 (Summer) 77-106

[25] Hagmann, T. (2005), 'Confronting the Concept of Environmentally-Induced Conflicts' *Peace Conflict and Development*: Issue Six, January.

literature difficult. Due to these gaps, the relationship between aspects of environmental security and violent conflict is poorly understood and therefore warrants more research. Hagmann notes that the concept of 'environmentally-induced conflicts' is fundamentally flawed as it neither allows for convincing empirical substantiation nor sound theory building. Serve as a source of reference for academic as well as policy makers. The unending conflicts and violence over water and pasture among the pastoral communities in Kenya that normally sucks in neighboring communities from Uganda, Sudan, Ethiopia, and Somalia means that so far the current regulatory and management frameworks are ineffective in addressing conflicts among pastoralist across and within national borders. Overall, the study will serve as a source of reference for academic as well as policy makers.

1.8 Research methodology

This section discuss on research methodology that was used to meet the objectives of the study and includes research design, study area, target population, sample and sampling procedures, study instruments, validity and reliability of the study instruments, data collection procedures, data analysis techniques and ethical considerations.

1.8.1 Research design

A research design is a strategy of investigation to obtain answers to research questions while guiding in collecting, gathering, analysing and interpretation of observed facts Kerlinger, (1964). In this study, a causal design was adopted. A causal is whereby the researcher tries to investigate the cause of a given phenomenon or problem. According to Mugenda and Mugenda (1999) in every study we usually have dependent and independent variables and it is usually

assumed that independent variables causes dependent variables and if the study is trying to find out the relationship of the two variables then it is a causal research. This study investigate if there is any relationship between environmental conflicts and the Kenya's national security in Turkana area.

1.8.2 Study area

The study took place in Turkana region. The Turkana people have historically occupied the area in northwest Kenya located west of Lake Turkana. They began as nomadic shepherds in Uganda but after suffering from a severe drought, migrated to the area in Kenya that they occupy today. Today the Turkana people are primarily cattle herders and number around 100,000. The area that the Turkana occupy is for the most part unsuitable for growing crops, thus explaining their high dependence on cattle. Most of their population lives in the Lake Turkana area in Kenya but others are known to live west of the Omo river in Ethiopia as well as the Ilemi triangle in Sudan. The survival of this tribe depends upon their ability to acquire land as well as their ability to raise and gain more livestock. While the Turkana people practice a mixed economy, about 80% of their livelihood is dependent on raising livestock. The Turkana raise livestock such as sheep, camel, cattle and goats and their diet consists of the milk and meat that they acquire from these animals. This group is also known to trade with other ethnic groups in order to supplement their diets but these interactions often result in disputes over whether these trades are equitable or not.[26]

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[26] Google Earth, by Jesse Creedy Powers

1.8.3 Target population

Population refers to the entire group of individuals, objects, items, cases, articles or things with common attributes or characteristics. According to Mugenda (2008) defines a target population as a population that comprises of all individuals, objects or things that the researcher can reasonably generalize his or her findings to. The target population in this study comprise of 120 people who will be drawn from two groups of both the employed and those who engage in pastoralism as a way of livelihood.

1.8.4 Sample and Sampling Procedure.

According to Mugenda (2008) available resources and time are not always enough to allow the researcher to use the whole population in a study, it is therefore necessary to select a representative sample from the accessible population that can easily be studied and inference made to the larger population.

The researcher utilized purposive sampling and purposively chose a sample size of 60 respondents from the two group which mean that each group will comprise 30 respondents each. This sample is deemed adequate given the qualitative nature of the study that will yield rich data to answer to the study objectives.

1.8.5 Data Collection Procedure and Instruments.

According to Mugenda (2008) Data collection procedure refers to the protocol that must be followed to ensure that data collection tools are applied correctly and efficiently. Data was collected through questionnaires and interview schedules to the objective of the study.

Questionnaires contained both open ended and close ended questions, open ended questions were used to gather information on opinions of the respondents i.e.to measure the objective responses while close ended were used to help in ensuring standardization and compatibility of information i.e. to measure subjective responses, questionnaires were used because they are easy to administer, in this case the questionnaires were administered on-line to the research assistant who produced enough hard copies for respondents, it was less expensive and it didn't take a lot of time. Interview schedules were also used to obtain information from those respondents who were easier to access especially those who are employed and were found in their offices during the working hours. Interview schedules are appropriate because they can facilitate clarification. Data was collected from primary and secondary sources. Primary data are information collected directly from the respondents through questionnaires and interview schedules. Secondary data are information collected from the previous study these information's are contained in test books, journals, magazines, scholarly articles, government documents, working, websites papers and research reports. Secondary information collection review was undertaken in order to provide contextualized background information on historical and contemporary issues.

1.8.6 Piloting

Piloting can refer to feasibility studies which are "small scale version[s], or trial run[s], done in preparation for the major study" (Polit et al., 2001: 467). However, a pilot study can also be the pre-testing or 'trying out' of a particular research instrument (Baker 1994: 182-3). One of the advantages of conducting a pilot study is that it might give advance warning about where the

main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated. De Vaus (1993: 54).

This study was based on qualitative methods. The first phase of a pilot involved using in-depth interviews and focus groups to establish the issues to be addressed in the structured interview guide. Next the structured guide where by the range of answers on questions, were piloted. A final pilot was conducted to test the research process, e.g. the different ways of distributing and collecting the questionnaires.

1.8.7 Validity

Validity in qualitative research refers to whether the findings of a study are true and certain "true" in the sense that research findings accurately reflect the situation. And "certain" in the sense that research findings are supported by the evidence. Triangulation is a method used by qualitative researcher to check and establish validity in their studied by analysing a research question from multiple perspectives Patton (2002).Data triangulation was used to validate this study. Various sources of information were used in order to increase the validity of the study.

These sources were participants from the two groups i.e. the employed and the unemployed respondents. In-depth interviews was conducted with each of these groups to gain insight into their perspectives on the issue of environmental conflict and national security. During the analysis stage, feedback from the participants groups will be compared to determine areas of agreement as well as areas where they diverge.

1.8.8 Data Presentation and Analysis Procedure.

After collection of data from the respondents use of descriptive statistics was adopted for the analysis of data in which gathered data was analysed in form of frequency distribution and percentages. The analysed data was presented using tables and figures.

1.8.9 Ethical Considerations

Before the questionnaires are given out, a letter of consent (Appendix 1) was attached and respondent were asked for their informed consent to participate. Explanations was given to all the respondents concerning confidentiality. The study ensured confidentiality and privacy by using codes and pseudonyms instead of real names of the respondents. Confidentiality and privacy was maintained throughout the data collection, analysis and dissemination stages. Due to the sensitive nature of this study, respondents were given a brief introduction of the study topic and expectations in a consent form, of which they signed to show their willingness to participate in the study. Respondents were also informed of their right to disqualify themselves or withdraw at any stage of the study. The information provided was recorded as provided without alterations or exaggeration and respondents were provided with publications upon request.

1.9 Limitation of the study

Patton (1990) notes that "there is no such thing as a perfect research designs. There are always trade-offs"(p.162).According to Courtney 2008, "questionnaires conducted for my previous thesis in the this area achieved a very low return rate (7.9%); it would exclude the high number of illiterate people. Based on this remark and of those who conducted their research in this area, the use of questionnaires is not effective.

10.1 Chapter summary

This study is organized around five chapters. **Chapter One**, "An introduction to the Study" introduces the subject matter of the study, sets the context and delimits its scope that includes limitations. It contains the statement of the problem, objectives, hypotheses and policy and academic significance of the study. It has a definition of conceptual issues mainly environmental conflicts and national security and concludes with a discussion on research methodology. **Chapter Two,** "Issues in Environmental conflicts and national security.**Chapter Three**, "The Environmental conflict and National security in Turkana Kenya and conflict management in the area." **Chapter Four**, "Data Analysis, Presentation and Interpretation. **Chapter Five,** "Summary of Findings, Conclusions and Recommendations

CHAPTER TWO

ISSUES ON ENVIRONMENTAL CONFLICT AND SECURITY

2.1 Introduction

This chapter discusses the various discourses on security and environmental conflicts. The reviewed literature is on various debates on the interface between security and environmental conflicts with respect to pastoral communities in North Rift region in Kenya. The literature on environmental security is mainly on the debate around securitization of environment.

2.2 Environmental conflicts

Several authors argue that conflict emerges when stakeholders have irreconcilable differences or incompatible interests, values, power, perceptions and goals. Furthermore, if unresolved or not managed, conflicts are likely to escalate and intensify. White et al. state: 'What distinguishes conflicts from mere disagreement is thus a behavioural expression of formerly latent attitudes where one party is perceived to take action at the expense of another party's interests'.[27] Some examples of expressions of conflicts are threats, beating, appropriation, insurgency, skirmishes, and interstate or intrastate wars.[28] Competition for fit environmental resources, divergent attitudes and beliefs as well as institutional factors trigger and exacerbate such environmental conflicts.[29] The issue of scarcity, whether perceived or actual, is a crucial component of understanding environmental conflicts. Broadly, scarcity conflicts characterise most environmental contestations and disputes addressed in this issue. Numerous types of environmental conflicts are identified in the literature and include:

2.2.1 Biodiversity conflicts:

Conflicts between people about wildlife or other aspects of biodiversity.[30] This also includes conflicts relating to conservation of protected areas, green technologies as well as fair trade and patenting rights in relation to biodiversity and indigenous knowledge linked to natural

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[27] White et al. (2009)Developing an integrated conceptual framework to understand biodiversity conflicts. *Land Use Policy*, 26, pp. 242–253.
[28] Reuveny, R. 2007. Climate change-induced migration and violent conflict. *Political Geography*, 26, pp. 656–673.
[29] Hellström, E. 2001. *Conflict cultures – qualitative comparative analysis of environmental conflicts in forestry*. Silva Fennica Monographs 2. Helsinki, The Finnish Society of Forest Science and The Finnish Research Institute.
[30] White et al Developing an integrated conceptual framework to understand biodiversity conflicts. *Land Use Policy*, 26, pp. 242–253.

resources. These conflicts can occur internationally and have serious regulatory and policy implications. Impacts on the natural resource base in terms of land clearing for development and agricultural production as well as the effects of genetically modified crops on biodiversity are important considerations as well. There is evidence to suggest that if conservation and environmental management policies are not formulated and implemented in a holistic way to balance the needs and interests of conservation and people, it can lead to conflict. For example, in this issue Okech fids that in Kenya environmental protection and management can create situations where 'people become the victims of animals' and then retaliate by killing animals for bush meat or to protect their crops or cattle from disease and predators. Linked to biodiversity conflicts are natural resource management (NRM) conflicts. Yasmi et al. highlight that conflicts, many of which include violence, in NRM are on an increase and are complex because of multiple actors and the wide range of issues and management strategies. However, what is important to underscore is that conflicts over environmental resources can result in violent conflicts and this can transcend nation-state boundaries. [31]

2.2.2 Coastal zone conflicts.

Conflicts in coastal zones are interesting in that they could develop from a combination of other types of conflicts. In this issue, Ahmed considers such conflicts in particular and highlights that coastal areas are unique in the dynamics they produce around environmental conflicts. This has to do with high development demands, high population density, environmental degradation and importantly, poor and disjointed management to balance conservation and development.

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[31] Yasmi, Y., H. Schanz and A. Salim 2006. Manifestation of conflict escalation in natural resource management. *Environmental Science and Policy*, 9, pp. 538–546.

The author highlights two types of coastal zone conflicts – those related to ecosystem change and those related to coastal development.[32]

2.2.3 Conflicts disproportionately affecting women.

Women are often vulnerable in the broader sense (physically, economically, socially and politically) and therefore often carry a disproportionate brunt of the effects of environmental conflicts and stress. A number of authors in this issue highlight this point. Perry et al. assert that while the actual costs of environmental conflicts on women are multifaceted and hard to measure, women often experience greater food and economic insecurity, and are affected by unsafe or illegal practices.[33] Omolo found that women in pastoral communities in Kenya are made vulnerable through cattle raids, which are often the result of droughts.[34] Bob also highlights that apartheid-induced land scarcity has led to women being abandoned, experiencing violence and widows being dispossessed of land.[35]

2.2.4 Conflicts about air quality and noxious pollutants.

This is a key type of environmental conflict prominent in the literature and in this issue Jaggernath relates to issues pertaining to social justice and the right to live in a healthy environment. Mix and Shriver focus on local resident perceptions and concerns. It is important

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[32] Ahmed, F. 2010. Approaches to and tools for managing environmental conflicts in coastal zones in Africa: Challenges and prospects in relation to Integrated Coastal Zone Management (ICZM). *African Journal on Conflict Resolution*, 10 (2), pp. 31–47.
[33] Perry, E., C. Potgieter and U. Bob 2010. Environmental conflicts and women's vulnerability in Africa. *African Journal on Conflict Resolution*, 10 (2), pp. 121–136
[34] Omolo, N.A. 2010. Gender and climate change induced conflict in pastoral communities: case study of Turkana in north-western Kenya. *African Journal on Conflict Resolution*, 10 (2), pp. 81–102.
[35] Bob, U. 2010. Land-related conflicts in Sub-Saharan Africa. *African Journal on Conflict Resolution*, 10 (2), pp. 49–64.

to note that these studies also highlight divergent perceptions over environmental threats, which are important in terms of managing these conflicts. Furthermore, an important theme is environmental racism and the links between poverty and vulnerability. While most conflicts relate to demonstrations and legal disputes as local residents and environmental activists mobilise communities to assert their rights, there are also incidences of violent conflicts. Environmental conflicts associated with air quality issues, such as in the case of the South Durban Basin (SDB) in South Africa, often also receive considerable media attention. Other key types of conflicts include land and water conflicts, which are discussed below.[36]

2.2.5 Land conflicts

Globally, but particularly in Africa, a significant proportion of people is dependent on land to make a living. As noted by Kok et al. The importance of land in conflicts relates to people's ability to make a living or make a profit. Land scarcity or ambiguous property rights can contribute to grievances and violent conflict. This is particularly the case when alternative livelihoods are absent, and is often exacerbated when communities are armed. Moreover, when land contains valuable mineral resources, conflicts can arise between local communities and those who seek control over land for resource extraction. Population growth and movement, international markets, insecure property rights and legislation, climate change, environmental degradation and a myriad other factors all appear to be variables that need to

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[36] Mix, T.L. and T.E. Shriver 2007. Neighbours, nuisances and noxious releases: Community conflict and environmental hazards in the atomic city. *The Social Science Journal*, 44, pp. 630–644.

be tracked in analysing conflicts where land plays a role.[37] Finally, desertification, unsustainable use or drought can bring communities with competing livelihoods into further conflict. In this issue, Bob considers land conflicts in Sub-Saharan Africa he draws attention to the many reasons and complex interplay of issues that can lead to conflict, such as the role of power in securing land tenure and the way poverty and inequality often limit access to land. Land can also be used as a tool for manipulation by those with power.[38] Moodley et al. for example emphasise the key role that land played in the Rwandan genocide. Land was not the primary reason for the genocide, but became a tool whereby ordinary citizens, whose livelihoods were increasingly vulnerable because of shrinking sizes of land, were incited to kill and take their neighbour's land and belongings. The authors also highlight the vicious feedback circles where the genocide led to environmental degradation and deforestation, in turn create intensions.[39]

2.2.6 Water conflicts

Klare cited in Gleditsch et al. states that by 2050 the increased demand for water could produce 'intense competition for this essential substance in all but a few well-watered areas of the planet'. Countries that share rivers therefore have a higher risk of military disputes or water wars (Gleditsch et al. Furthermore, several countries rely on water sources from outside their

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[37] Kok, A., W. Lotze and S. van Jaarsveld 2009. Natural resources, the environment and conflicts. African Centre for the Constructive Resolution of Disputes (ACCORD). Available from: <www.accord.org.za> [Accessed 16 March 2009].
[38] Bob, U. 2010. Land-related conflicts in Sub-Saharan Africa. *African Journal on Conflict Resolution*, 10 (2), pp. 49–64.
[39] Moodley, V., A. Gahima and S. Munien 2010. Environmental causes and impacts of the genocide in Rwanda: Case studies of the towns of Butare and Cyangugu. *African Journal on Conflict Resolution*, 10 (2), pp. 103–119.

boundaries. Local and international competition over water resources will increase. This is likely to have impacts on national security as well as threaten livelihoods at the local level. The water itself is not only a source of conflict, but the resources in the water bodies, specifically fit, are also points of contestation. This is particularly relevant in contexts where communities or countries share boundaries.[40] The problems are likely to be worse in contexts where boundaries are not clear and there are competing claims for resources. For example, Onuoha illustrates how environmental degradation and in particular diminishing water resources in Lake Chad has created conflicts and undermined livelihood sustaining activities in Cameroon, Chad, Niger and Nigeria. The study specifically highlights conflicts between and among fishermen, pastoralists, farmers and in some cases state security agents. Furthermore, Onuoha underscores the implications of conflicts that often degenerated into large-scale intra-ethnic, intra state and inter-state conflicts. Water conflicts are also directly linked to food security and the provision of fresh water. Water is a crucial resource for agricultural productivity and contestations over water rights and access can (and do) undermine agricultural productivity levels.[41] Furthermore, water degradation and conflicts are also linked to the migration of biodiversity (including people). For example, the migration of people in search of better sources of water is a widespread phenomenon in Africa. In the northeast of Tanzania (Pangani River Basin) migration has led to the convergence of pastoralists and farmers and to rapid population increases of both human beings and livestock (Mbonile) . Intensive water conflicts were caused, in which different irrigation systems (traditional and modern large-scale types) and uses of

[40] Gleditsch, N.P., K. Furlong, H. Hegre, B. Lacina and T. Owen 2006. Conflicts over shared rivers: Resource scarcity or fuzzy boundaries. *Political Geography*, 25, pp. 361–382.
[41] Onuoha, F.C. 2008. Environmental degradation, livelihoods and conflicts: A focus on the implications of the diminishing water resources of Lake Chad for North-Eastern Nigeria. *African Journal on Conflict Resolution*, 8 (2), pp. 35–62.

water (as hydropower generation) also played roles. Climate change, discussed next, is deemed to intensify environmental conflicts and is inducing new forms of environmental conflicts.[42]

2.3 Conflicts among pastoralists

For centuries, the livelihood of pastoralists has revolved around questions of survival strategies such as mobility and seasonal migration to sustain pastoralism. However, the twentieth century saw pastoralism come under great stress as pastoralists in the region experience widespread violence in an effort to respond to the various challenges, a situation that has driven them in what one writer describes as a persistent state of crisis.[43] The natural endowment of the pastoral areas is limited and unevenly distributed and large parts of it are not suitable for sedentary life. In addition, due to low rainfall, these areas are subjects of recurrent and prolonged famine and drought and therefore unable to support sustainable vegetation growth. In order to cope and adapt, the lifestyle of pastoral communities is modelled around seasonal movements that are characterized by migrations and population shifts in search of pasture and water, hence exposing their livestock to more risks such as attacks   and   diseases. Succinctly, constant jostling and shoving of people in search of resources, mobility and the vagaries of harsh environmental conditions in pastoral areas and mobility is a crucial part of the community's livelihood.[44]Generally, explanatory factors for conflict among pastoral

[42] Mbonile, M.J. 2005. Migration and intensification of water conflicts in the Pangani Basin, Tanzania. *Habitat International*, 29, pp. 41–67.
[43] Onyango, E.O (2010), Pastoralists in Violent Defiance of the State: The Case of the Karimojong in Northeastern Uganda

[44] Markakis, J. *et al*(1994), Ethnicity & Conflict in the Horn of Africa, (London, James Currey, Athens, Ohio University Press).

communities in the IGAD region range from resource scarcity theories, social and psychological

reasons, structural arguments, the nature of the global political and economy and lack of

fulfilment of basic human needs. The survival strategies takes advantage of the mixed social

environment that many pastoralists live in through trading, exchanging, building alliances

among themselves but also with ranchers, crop farmers and urban dwellers.[45] Often such

relations and alliances end up becoming competitive and lead to violent conflict and armed

clashes   over   the

resources, a situation worsened by the population increase, loss of land, and civil strife.

Competition over pastureland, watering points, control and access to routes and market places

and the traditional practice of livestock raiding are perennial bone of contention and remains at

the heart of insecurity among the pastoralists in the IGAD region. Furthermore, the

conventional explanation of the seasonal migration by the pastoralists and increased conflicts is

that resources are becoming scarcer due high incidence of drought, instruction of commercial

agriculture, and increased involvement of pastoralists in trade. Some studies have shown that

the scarcity of water and grazing land contributes to conflicts among pastoralists in Kenya. Such

conflicts are mainly common between ethnic communities but in certain instances, they occur

within the same ethnic group. On this basis elements of group identity theory which uses social

psychology in explaining conflicts relating to ethnicity among others finds relevancy in

explaining pastoral conflicts.[46] The focus is on the way groups reinforce their identities and the

"us-them" cleavages that often result. Individuals may have a need for a sense of camaraderie

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[45] Fratkin, E. (2004). Ariaal Pastoralists of Kenya: Studying Pastoralism, Drought, and Development in Africa's Arid Lands. (Boston: Pearson Educ)
[46] Geisinger, A..(2004), 'A Group Identity Theory of Social Norms and its Implications' *Tulane Law Review*, Vol 78, pp 605-652

or "we-ness" that can be satisfied in a group when it discriminates against or attacks another group. Similarly, a person's sense of self-worth may be strengthened when his or her group's status is enhanced relative to that of other groups. By attacking outside groups, leaders may try to exploit these needs in order to increase their political power within their own groups, but this behaviour makes divisions between groups deeper and more acrimonious. In the context of the pastoral communities this happens mostly across communities rather within. In many cases, conflicts in pastoral areas are common across communities and clans rather within or across where the other is viewed as outsiders. The claim that competition over access and control of scarce natural resources is the cause of the conflicts is being challenged since societies all over the world compete for exploitation of natural resources but do not persistently engage in deadly violence.[47] Although the claim that natural resource scarcity induces conflicts has been found to be true in some situations, a recent study[48] has revealed otherwise. An empirical work on the relationships between natural resources, scarcity and pastoral conflicts in Kenya challenges the widely held view that inter-ethnic pastoral conflicts are mostly motivated by declining per capita, livestock wealth (or wealth differentiation between different groups) or induced by scarcity of natural (or environmental) resources. The study, which is, based on long time data analysis points to the fact that the frequent occurrence of violent conflicts is due to the failure of local and national institutions in building peace thereby laying the blame on governance. Some analysts[49]focus on the level of states suggesting

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[47]Onyango, E.O (2010),Pastoralists in Violent Defiance of the State: The Case of the Karimojong in Northeastern Uganda, op cit

[48] Wario, R. etal (2009), 'Scarcity of Natural Resources and Pastoral Conflicts in Northern Kenya: An Inquiry' in theHorn of Africa Bulletin, Volume 21, No, 1, January, (Life & Peace Institute),pp 1-5.

[49] Ibid

that government policies, which promote structured inequality along group lines, are behind various conflicts while others focus on group and individual level suggesting ethnic, racial or religious lines amid competition for power. Part of this argument has some relevancy when discussing the question of governance in relations to the pastoralists. The problem of human insecurity among the pastoral communities is largely an outcome of the failure of the post-colonial independent states to extend their institutions of governance to pastoral areas. Marginalization of the pastoralists has its roots from the colonial period and perpetuated throughout the post-independence period. Overtly, the colonial administration considered pastoral lands as uneconomical due to its poor resource base (basically arid). The bulk of public resources were concentrated in the 'high potential areas' leaving the pastoral communities lagging behind in all spheres of development.[50]Economic and political activities were concentrated in high potential areas. The government developed schools, health facilities, roads, communications infrastructure, and administrative structures in these areas and left the arid zones with little or no activity to support meaningful development. The postcolonial administrations have not done much to correct this imbalance, instead they have promoted the same by simply concentrating most of development initiatives in 'high potential' areas. This ties in well with some elements of the neo-liberal economic theory that posits that causes of conflicts may be found in the analysis that emphasizes the structure of the international system such as the historical legacy of colonial era and delimitation of borders that have produced dysfunctional states or

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[50] African Socialism and its Application to Planning in Kenya accessed on 5 May 2010 Op cit,

globalization-induced growth of social and economic inequalities.[51]The behavioral school of thought locates conflict causes within the social and psychological frameworks in which human behavior is the key determinant whether at the individual or group levels.[52]They highlight perceptions and misconceptions as causes of conflict. Frustration and aggression theories use individual psychology to explain civil strife, including strikes, riots, coups, revolutions, and guerrilla wars. They suggest that individuals become aggressive when they feel frustrated by something or someone they believe is blocking them from fulfilling a strong desire. An important subset of these theories suggests that relative deprivation can cause this frustration and aggression when people perceive a widening gap between the level of satisfaction they have achieved (often defined in economic terms) and the level they believe they deserve. They argue that an aggressive behaviour is innate and biologically programmed in the human species. One dimension of the behavioural theory argues that processes of group formation and differentiation, particularly the role that images, (mis)perceptions, stereotyping, and dehumanizing play in decision making lead to violent conflicts and represent a psych-social perspective. Aspects of this school of thought are true regarding pastoral communities in Kenya. The structural approaches advance conflict theories and issues related to structural causes of conflicts. It issues out of the assumption that the structural arrangement of the

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[51] El-Tom, A O(1994),'Mugging the Poor: The Bretton Woods Institutions and the Pursuit of African Development' (Maynooth, Ireland, Institute for African Alternatives)
[52] Lorenz, K, (1974) On Aggression Marjorie Kerr Wilson (trans) (New York and London, Hancourt Brace Jovanovich), Volkan, V. (1988)The Need for Enemies and Allies From Clinical Practice to International Relations, (Northvale, New Jersey Aronson,), Bloom, W. (1990) Personal Identity, National Identity and International Relations (Cambridge: Cambridge University Press).

society itself creates the causes and conditions for conflict. According to Mwagiru[53]structural conflicts are part of the nonviolent conflicts and exist because there is something wrong with the structure of relationship between people. Writing on structural violence, Galtung[54]argues that unequal social structures produce unequal access to resources for different social groups. A structural conflict is a consequence of structural factors and necessitates an examination of factors beyond triggers and accelerators, which are immediate and often provide an opportunity for long standing problems to manifest themselves. Recognizing these underlying problems and understanding their root causes is a difficult task as the fabric of conflict rarely is woven of a single thread. These structures are economic, social, psychological, religious, and legal frameworks. The differentiation and inequalities that occur in various sectors along these lines is a consequence of these structures, which eventually effects relationship within and across society.[55]The structural approach to conflicts requires a deeper analysis of the structure that defines social relationships in particular settings and entails addressing the hard questions concerning the fundamental causes of conflict and not what has instigated or sparked off a conflict. The search for root or structural causes lies in efforts to find the underlying and sometimes elusive source of violence. Many times structural factors are not always visible and issues such as ethnic enmity, religious intolerance or hate speech are often manifestations of deeper structural issues. Structural causes are deep-seated social structures that give rise to individual and group grievances. Issues of natural resource management such as access to

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[53] Mwagiru, M. (2003) Peace and Conflict Management in Kenya, Nairobi, Catholic Justice and Peace Commission–Nakuru Diocese, P9

[54]Galtung, J. (1996),Peace and Peaceful Means: Peace and Conflict Development and Civilization (Oslo, Norway and Thousand Oaks, California International Peace Research Institute, Sage Publications,)

[55] John,B.(1990),Conflict Human Needs Theory (London, Macmillan)

water, absence of water and security and systematic economic marginalization have been underlying drivers of conflicts in pastoral areas. Marginalization of pastoral zones demonstrates the crisis of governance in the entire IGAD region: The governments have privileged some areas and communities over others in the development process of the country. Apart from the parallel marginalization, parts of the citizenry have been excluded from the mainstream political and economic affairs. This has led to resentment that has sometimes spawned violent conflicts in the region. The unusually high-level intensity conflicts has escalated among pastoralists across and within international borders in what looked much like cattle raiding. The introduction of automatic weapons and intermittent episodes of civil strife, which have, became almost synonymous with pastoralism have worsened the situation. This locates the question of security among the pastoral communities in the IGAD region within the international political economy. A study by Sandra[56]has demonstrated the connection of Africa with the global political economy through crime networks, illegal trade in natural resources or small arms trade which exacerbate and prolong if not necessarily cause war. In this regard, and within the context of conflicts in pastoral areas, local and regional actors in international networks are contributors as actors through illegal trade in small arms and it is therefore imperative that conflict prevention and management need to be treated as process involving local, national, regional, and global complexes. The introduction of cheap and easily accessible small arms and light weapons has intensified the situation resulting in continuous insecurity and loss of life and property. According to the UN Panel of Experts definition and which this

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[56]Maclean, S. J. 'Fighting Locally, Connecting Globally: Inside and Outside Dimensions of African Conflict' in the Roots of African Conflicts, the Causes and Costs. (eds) Nhema, A. and Zeleza, P.T, (2008) OSSREA, Addis Ababa, 166-180

study uses light weapons refers to a range of weapons designed for use by more than one-person serving as a crew.[57] They include heavy machine guns; hand held under-barrel and mounted grenade launchers; portable anti-tanks and anti-aircraft guns; recoilless rifles; portable launchers of anti-tank and anti-aircraft missiles and mortars of carbines less than 100mm. On the other hand, small arms are a sub-set of light weapons that are designed for personal use and include revolvers and[58]self-loading pistols, rifles and carbines, assault rifles, sub-machine guns and light machine guns. Ammunitions and explosives are considered an integral part of the small arms and light weapons. This study also uses the term small arms to refer to both small arms and light weapons. Overall these arms do not require extensive logistical capabilities and thus are convenient for high mobile operations. They are widely available, durable, highly portable, easily concealed, and possess legitimate military, police and civilian uses (so are present in virtually every society) and often so easy to operate and require minimal training. Due to the enormous firepower and lethality in particular of light weapons such as mortars, rockets and grenade launchers, individuals or armed groups can cause heavy civilian causalities and massive destruction of properties even with limited financial, material and technical support. Furthermore, their relatively low acquisition and maintenance cost in comparison with other conventional arms, makes them weapons of choice to armed non-statutory actors. These weapons are also relatively light in weight, and therefore convenient among child soldiers that have been participated in Somalia, Sierra Leon, Liberia, Sudan and

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[57]See the UN Panel of Experts (1997) definition which distinguishes between Small arms and light weapons

[58] See the UN Panel of Experts (1997) definition which distinguishes between Small arms and light weapons

Uganda.[59]Initially, raiding animals among the pastoral communities was contacted under certain norms and values that were designed to limit damage to life and property and was resolved in a manner that provided for mediation, dialogue and compensation rather than punishment.[60] The introduction of small arms has drastically altered the rules of the raiding in that they have intensified and increased the scale and lethality of conflicts in pastoral areas. The situation was worsened by the experience gained by pastoralists who have fought in some of the civil Human Rights wars in the IGAD region.[61]According to the African Union/InterAfrican Bureau for Animal Resources (AU/IBAR) the availability of automatic weaponry from macro level conflict in the region (such as Sudan, Ethiopia and Somalia) have led to increased banditry and made commercial raids more viable. Small arms have intensified, spread violent conflicts and allowed smaller groups of raiders to act sometimes without the approval of the community through elders.[62]Before the influx of small arms to pastoral areas in the late 1970s, pastoralists competed for land and cattle and still faced inadequate state security but relied on less lethal weapons such as bows, arrows and spears for protection. In a context of increasing vulnerability at the household level, both from insecurity and economic decline, small arms are regarded as household or community assets. In some families, within the pastoralists, small arms are transferred from father to son as an inheritance and it is difficult to separate such people from

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[59] Watch/African Rights Watch, (1997) The Scars of Death Children abducted by the Lord's Resistance Army in Uganda, Children's Rights Project, (New York, Human Rights Watch/African Rights Watch,)
[60] Wairagu, F. 'Raids and Battles involving Turkana Pastoralists' in Fighting for Inclusion: Conflicts among Pastoralists in Eastern Africa and the Horn (eds) Goldsmith, P. et al (2007) Development Policy Management Forum (DPMF) pp 33-54
[61] Markakis, J. 'Conflict in the Horn of Africa' in Environment and Conflict in Africa: Reflections on Durfur. Leroy, M. (ed), (University for Peace Programme, Addis Ababa, 2009) pp 54-59:57

[62]AU/IBAR, Pastoralism and Conflict: Getting Policies Right. Policy Briefing Paper No. 10, Nairobi.

the arms while in others they are community properties which must sanction their usage.[63]The

diffusion and use of illicit small arms among the pastoral groups have intensified the traditional

practice of livestock raiding, continues to fuel, and sustain conflicts hence creating zones of

insecurity across the arid and semi-arid areas of the region of the country. They have increased

hostility and invariably created 'zones of insecurity' where banditry, low-level insurgency, and

insecurity thrive. Chweya[64]notes that while conflicts in pastoral areas are a historical feature of

the pastoral communities rather than an emerging security issue, the infiltration of firearms has

exacerbated the magnitude, the frequency and the scale of atrocity associated with them.

Chweya notes further that 'the increased use of firearms rather than spears and arrows has

elevated the military technology applied in the defense or acquisition of scarce water, and

pasture and thereby transformed conflicts from previously occasional mid night raids to

outright and drawn out war'. Ufuho[65]notes that although certain practices such as cattle

rustling are linked to indigenous cultural practices, the introduction of modern weapons has

contributed directly to the intensity of conflicts in pastoral areas. Pastoral groups attack each

other during cattle raids, which have gained a high currency due to the use of small arms. A

study by the Institute for Security Studies observed that; 'The arid and semi-arid parts of the

horn are beset by recurring periods of drought. Pastoralist societies both sedentary and

nomadic have been struggling with these conditions. The fight for resources, historically a

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[63]Marwa, P.'Sungusungu in Kuria: An Indigenous Approach towards Control and Management of Small Arms' in Small Arms in the Horn of Africa: Challenges Issues and Perspectives, Brief No 23 (Bonn, BICC,(2002),
[64] Chweya, L. 'Emerging Dimensions of the Security in the IGAD region' in M. Makumi (ed) African Regional Security in the Age of Globalization (Nairobi, Heinrich Boll Foundation, 2004) pp.31-48:40 43
[65]Ufuho H. (2004) 'Security Concerns in the Horn of Africa' in M. Makumi (ed) African Regional Security in the Age of Globalization (Nairobi, Heinrich Boll Foundation,) pp.7-17:12

source of conflict among the people of these lands, has now become aggravated by the increased availability of small arms[66]The resultant conflicts are interlinked and have identical roots, structural causes and triggers. Patterns of conflict in pastoral regions in the IGAD region are at large complex. There are many factors contributing to the incidences of violent conflict involving pastoralists, and these have tended to become mutually reinforcing. Some conflicts among and between pastoralist communities, such as cattle rustling have a long history and have partly become an aspect of traditional pastoralist culture. The literature on the discourses of conflicts shows that insecurity in pastoral areas over the past decades have been over tough issues of security, access to resources, and territory rights under the law in an environment of governance deficit. Furthermore, these literatures cannot be located within one theoretical framework instead the instability in these marginal regions of the IGAD region find accommodation in a number of theoretical frameworks that includes structural theories, the level of states, social and psychological frameworks, and group identity theories among others. However, elements of all these frameworks find relevancy in pastoral areas because of governance deficit. Within these frameworks, it emerges that there is limited state administrative and security structures in pastoral areas coupled with inadequate policing, widespread use of modern weaponry in the practice of cattle rustling and the diminishing role of traditional governance systems which is a consequence of governance deficit. In addition, issues relating to competition over control and access to natural resources such as pasture and water, land issues, political incitements, ethnocentrism, increasing levels of poverty and high

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[66]Ibid P.14

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rate of unemployment particularly amongst the youth have made hitherto localised conflicts in pastoral areas increasingly destructive and less manageable.[67]

2.4 Conclusion

The study concludes that the landscape of pastoral conflicts changes in an unpredictable way, which is making responses more difficult and research into the realities of these conflicts challenging. The problem of conflicts in pastoral areas and violent raids in the past decades is mainly blamed on increases in populations, ecological stress and a dwindling resource-base, and the resulting competing claims over scarce natural resources. At the root of conflicts in pastoral areas are issues of governance and development. Kiflemariams identified structural and cultural impediments to conflicts in pastoral areas including curbing the misuse of small arms and proposed that the obstacles need to be turned into strategies for preventing the uncontrolled accumulation and the misuse of weapons. The study identified issues such as politics of social and economic marginalization, refugee crisis and IDPs, lack of opportunities for youth and resource scarcity as some of the explanatory factors that underpin the structural causes and impediments to improving human security among pastoralists. In this regard, pre and post-colonial policies have vilified the social and political integrity of the pastoral society and material hardship, intensified competition for resources further undermining social cohesion and traditional authority. The relationship between natural resources, environment and conflict is thus multidimensional and complex but in the context of the pastoral groups in Kenya, two principal elements can be observed9 i.e. contributing to the outbreak of conflict and undermining conflict resolution and peace building. Natural resources contribute to the outbreak of conflict in situation where for instance attempts to control watering points and pasture caused by environmental degradation. Among the most direct effects of the raiding are loss of human lives, reduced number of livestock as well as reduced access to water, pasture and even loss of

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[67] Pkalya,R. et al(2003), 5, Conflict in Northern Kenya: A focus on the internally displaced conflict victims in Northern Kenya; op cit

homes. In addition, the conflicts lead to distrust in other communities and a strong omnipresent perception of insecurity which entails several and partly interconnected subsequent effects. These effects include ineffective resource use, reduced mobility, closing of markets and schools and obstacles for investments. In combination with droughts, diseases, small arms and social, political and economic marginalization, the effects of raiding pose a significant threat for pastoral livelihoods. In fact, one could argue that the conflicts are 'raiding pastoral livelihoods'. Against this background, there is a need for effective conflict mitigation that breaks the cycle of violence, retaliation and impoverishment. To move from the conflicting to a cooperative path, one could start by addres sing the capability of the actors. In theory, disarmed groups cannot cause as much harm as armed groups. However, as governmental disarmament efforts of the past were selective and poorly coordinated, they predominantly failed, partly aggravating conflicts between communities.[68] Given the high availability of small arms in the region, it is more promising to address the motivation of the actors by decreasing the attractiveness of raiding and increasing the attractiveness of non-violent alternatives that increase the capabilities in cooperative activities.

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[68] Mkutu, KA. 2008. Guns and governance in the Rift Valley - pastoralist conflict and small arms. Bloomington: Indiana
University Press.

CHAPTER THREE

THE ENVIRONMENTAL CONFLICT MANAGEMENT AND NATIONAL SECURITY IN TURKANA KENYA .

3.1 Introduction

The theoretical and practical linkages between security and environmental security appear obvious because environmental degradation is in itself a severe threat to human security and all life on earth. It also can be both a cause and effect of conflicts. Pastoral areas receive low rainfall; sometimes they go for years without and are characterized by drought and famine with adverse effects on pasture and water. Consequently, scarcity of water and pasture due to weak legislative and institutional frameworks on management, utilization, conservation and development prompts massive movements of pastoral communities in search of these commodities, a situation that results into conflicts with their neighbors over these resources. Applying the Homer-Dixon model, there is indication that environmental scarcity in the context of weak and limited governance and institutional frameworks, poor and/or inappropriate policy responses, poverty and of high population pressure (both animals and human beings), is bound to induce armed conflict between pastoral communities.

3.2 Food security in Turkana

Turkana people were one of many affected by a severe drought in 1979 and 1980. Although the famine which resulted from the sharp drop in food production was dramatized by the international press, insecurity of food availability is characteristic of pastoral production systems. There are many challenges facing the food sector in Turkana being low or no food

productivity occasioned by recurrent drought (inadequate feeds and water), insecurity, land tenure system, poor breeds and breeding practices, endemic livestock diseases and poor livestock husbandry. Events in the 1990s and into the present have resulted in the pastoral areas making little contribution to the national development and food shortages is still a big threat. These negative events which have impacted negatively on the pastoral livelihoods includes: withdrawal of government from the provision of basic needs and services, for example, the introduction of cost sharing in education, health, water supply, and veterinary service; conflict spill over from the collapse of government in Somalia; the 1991 -1992 and 2005-2006 droughts, and famines; and more recently, the tribal tension resulting from the 2007 Kenyan presidential election fiasco.

3.2.1 Influence of Livelihood on Food Security

According to the common sense in the "outside world", pastoralists are 'closed communities' locked into their own traditions, and stubbornly opposed to any change or push for innovation. At best, they are seen as very conservative and slow to embrace the new national society, in historical settings in which 'the rest of the country cannot wait for them to develop'[69] According to Dyson the culture and technology and knowledge of the pastoralist is centred on livestock management and dependence and is linked to complex patterns of social organization and demographic structures, that is demographic structures of both herds and people. The linkages between gender, rural livelihood and food security are still missing in many studies. Despite the fact that women provide the bulk of the food and agricultural production, they are

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[69] Dyson-Hudson, R. (1999) .*Turkana in time perspective. In Turkana Herds of the Dry Savanna*. Ecology of Behavioral Response of Nomads for an Uncertain Environment .Ed by M.A Little and P.W Lesslie.

disadvantaged with regard to entitlements, the ownership of assets and access to and control over resources such as land and credit that are essential for agricultural production and livelihood generation[70] Ownership of land or access to even small pieces of land for farming has substantial effect on the food security status of rural households, even when income level is controlled for; the prevalence of food insecurity tends to be higher among landless or quasi landless households, who are much more dependent on riskier sources of income than farm income and on the diversification of the rural economy [71] Bruce adds that, in Turkana where there is no tradition of legalized, personal ownership of land, all of it being vested in the Crown, the Kenya government will eventually have to set policy on this matter.[72]

3.2.2 Effects of Poverty on Food Security

For all people to get enough food, agriculture must thrive. Higher yields, however, will not suffice to overcome hunger. The purchasing power of those in need must rise too[73]. Pastoralism and poverty are often associated by force of logic: pastoralism is believed to be an irrational and underdeveloped mode of production, therefore pastoralists are, so to speak, poor by definition. They are believed to depend on food relief for their survival[74]. According to (Food and Agriculture Organization of the United States. 2002), numerous studies confirm that improving access to land can have a major impact on reducing poverty and hunger. An exhaustive analysis in India found "a robust link between land reform and poverty

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[70]Marianne, Maiga. (2010) .*Gender ,AIDS and Food Security*: Culture and Vulnerability in Rural Cote D'Ivore. Vol.11 ,of Awlae Series':Wageningen Academic ,2010.

[71] Joachim, V.B., and Howarth, B. (1992), *Improving Food Security of the Poor: Concept, Policy, and Programs* (p.16).

[72] Bruce Currey.(1984).*Famine As a Geographical Phenomenon* ,p. 173.

[73] http://www.dandc.eu/register/index.en.shtml

[74] Saverio, Krätli. (2001) .Institute of Development Studies University of Sussex UK, p.11 Retrieved from http://www.eldis.org/fulltext/edunompov.pdf

reduction"…The study confirmed that land reform significantly reduced rural poverty and stimulated growth in agricultural wages. It appears, in addition, that the role of hunting and fishing in the food provisioning is often neglected. … The present-day heavy reliance on livestock by certain pastoralist groups, such as the Turkana[75]

3.2.3 Influence of Conflicts on Food Security

Conflict remains a major constraint to development in the Turkana sub-region, impacting government led investment of humanitarian assistance, development, and community interdependence for the Turkana people. Complex socio-political factors have exacerbated conflict in recent decades within Turkana and Karamoja cluster in general. Whilst conflict in the sub-region is largely low intensity, the protracted and complex nature (raids, banditry, rape and a spiral of revenge attacks) leads to loss of lives and livelihoods, destruction of physical infrastructure, restriction and interruption of customary natural resource management and disruption of social services as well as displacement of populations ultimately contributing to continuing extent and depth of poverty(Turkana Pastoralist Development Organization – [TUPADO]. 2011). The Turkana and Pokot are pastoralist communities in Kenya who live in the arid region of northwestern Kenya. They boarder each other, with the Turkana towards the North and the Pokot in the South. Conflict between these communities is historical as they both compete for resources that are increasingly diminishing with the increase in climate change. With the communities being pastoralists in such a region, they are inclined to follow a nomadic way of life ,in order to feed their cattle with the changing seasons and exhaustion of pasture,

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[75] Galvin ,(1985); Soper.(1985), Cited in, *Droughts, Food and Culture: Ecological Change and Food Security in Africa's Later Prehistory*, New York: Edited by Springer, (2002), p.263.

the communities therefore enter into the other communities' pasture land in order to ensure

the survival of their flock.[76] The communities have access to small arms procured from the

unstable regions of Sudan, Ethiopia, Somalia and Uganda. The existence of these firearms

further increases the intensity of the conflict since more casualties exist during raids and the

damage is more extensive[77] their pastoral neighbors, the Toposa, luckily located on the 'right

side' of both these boundaries, received free rations of food and veterinary services, local

Turkana received nothing but for the bullets.[78] The food problem in arid and Semi-Arid areas

can only be meaningfully addressed after the restoration of peace and security. The arid and

semi-arid areas make up about 80% of the land surface Kenya[79]   **3.2.4 Influence of**

Implementation of Policies on Food Security

National Food and Nutrition Security Policy addresses food security issues and outlines the

Kenya government's intervention measures that ensure that the country is food secure. This

involved the review of the Sessional Paper No. 2 of 1994 on National Food Policy and setting up

National Food Safety Agency incorporating the food traceability elements and international

Sanitary or Phytosanitary standards. This also involved drafting of the Food Security and Safety

Bill, which is now complete and has been forwarded to Agriculture Sector Coordinating Unit

(ASCU). The draft NFNP is ready.[80] However even with such promising policies that seem to

change the status of food security in Kenya and especially among the marginalized groups, the

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[76] Muthoni, Daisy M. *Climate Change as a Source of Human Conflict*: A Case Study of Eastern Africa. From
http://www.greenafricafoundation.org/documents/reserch%20project_2_.pdf
[77] Gateway, P. (2009, June 12). Reports from Kenya, Kakuma Refugee Camp. Retrieved from Water Wars:
http://waterwars.pulitzergateway.org/?p=6764 , 14,May 2012
[78] Vigdis, B. (2005). *Violence and Belonging:* The Quest for Identity in Post-colonial Africa.
[79] Angie Dawa. (1999).*Basic needs are basic rights:* The Core Challenge for Constitutional Reform in Kenya.
[80] Raphael, G. (2009). *Agricultural Policy-Making in Sub Saharan Africa*: Kenya's Past Policies. Nairobi:Tegemeo
Institute of Agricultural Policy & Development .

vicious cycle of famine and droughts are evident. Even irrigation farming, which was originally intended to alleviate destitution, has had remarkably little impact either in alleviating poverty or increasing food production, and has increasingly become dominated by the wealthy.[81] The impact of government policies on pastoralists in Kenya has been widely documented.[82] Some of these measures designed to remedy the problems of food shortages and under development in pastoral areas included: the Special Rural Development Project and the Kenya Livestock Development Project. The project definition of pastoral development was that of settlements based service delivery, implying that the pastoralists were to pay for the growing demand of beef in Kenya. This ignored the fact that these were people with very specific needs for frequent movements. The Kenya Livestock Development Project intervention saw an increase in health and education services and vaccination of livestock. With these free services, the local people got used to government provision of their needs, slowing down their practice of pastoralism.[83] It should be noted that the project was meant for all the pastoral areas, but ignored the Turkana District completely. This was despite the fact that, up to 1979, almost 90 percent of Turkana people were engaged in pastoralism, whereas only less than 7 percent relied on fishing, and only a little over 2 per cent on cultivation .[84]The areas where camps (Kakuma and Dadaab) are located are almost totally devoid of any investment or development

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[81] Diedrich, W. (1986) *Africa*, Volume 56, International African Institute, International Institute of African Languages and Cultures.
[82] Republic of Kenya. (1992). *Development Policy for the Arid and Semi-Arid Lands (Asal).* Nairobi: Government Printer, Kenya. Republic of Kenya. (2002). *Turkana District Development Plan 2002-2008: Effective Management for Sustainable Economic Growth and Poverty Reduction*. Nairobi: Government Printer, Kenya.
[83] Omosa, E. (2003). *Natural Resource Based Conflicts and Pastoral Livelihoods*: The Impact of Water Resource Based Conflicts on Pastoralism, Wajir District. University of Nairobi, Institute of Development Studies.
[84] Ochieng-Aketch, S. (1993).*Land Use and Land Tenure Systems in the Arid and Semi-Arid Lands (Asal) of Kenya*. Report Prepared for the Asal Team of the World Bank's Resident Mission in East Africa. Nairobi, Kenya.

activity, whether by The Kenyan authorities, private enterprise or international agencies.[85] The contribution made by transport projects to long-term regional economic change obscures the role of transport in the daily struggle for survival in places afflicted by food insecurity. In sub-Saharan Africa, limited infrastructure and transport service has occasionally disrupted food production and circulation. During the widespread food crises of the past decade, land, sea and air transport have been used more constructively to distribute food aid. An empirical review of the contradictory relations between transport and food insecurity precedes discussion of the logistics and potential impact of emergency food aid transport in north-eastern and southern Africa in the 1980s and 1990s.[86]

3.2.5 Weather conditions and Food Security

The impacts of climate change are likely to be spatially variable, and developing countries – many in Africa – generally are considered more vulnerable than developed countries due to their lower capacity to adapt.[87] Climate variability and change will result in fundamental alterations to ecosystem structures and functions. These in turn will affect human land-use and livelihoods and have the potential to make pastoralists more vulnerable.[88] In the future, climate change may become a contributing factor to conflicts, particularly those concerning resource

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[85] Edward, M. (2011).*Victims as Security Threats*: Refugee Impact on Host State Security in Africa.
[86] Pirie G.H. (1993). *Transport, food insecurity and food aid in sub-Saharan Africa*, Journal of Transport Geography. Elsevier Ltd
[87]Thomas, D.S.G., and Twyman, C. (2005). *Equity and justice in climate change adaptation amongst natural-resource-dependent societies*. Global Environment Change, 15, pp. 115–124.
[88] Galvin ,(1985); Soper.(1985), Cited in, *Droughts, Food and Culture: Ecological Change and Food Security in Africa's Later Prehistory*, New York: Edited by Springer, (2002), p.263.

scarcity[89] The Turkana practice small-scale agriculture, relying on floods along the main rivers and the lake shore (Soper, 1985).[90] Gufu Oba contends that, however, flood-dependent agriculture is a gamble, as crops are washed away whenever floods are excessive, whereas inadequate floods produce insufficient harvests. In spite of its important supplementary role, traditional agriculture does not provided enough surpluses to feed people during the periodic droughts. Furthermore, those groups inhabiting the lake shore are able to supplement their diet with fish from the lake. Irregularity of rainfall is a characteristic feature from year to year and within individual years. The very density of Kenya's arid and semiarid lands is low and the variation in forage quantity and quality is enormous. These variations and periodic lack of water for livestock due to low rainfall force pastoral communities (e.g. Maasai, Samburu, Turkana, and many others) to wander continuously with their herds of livestock .Due to drought, density as well as quality of pasture deteriorates and so do the physical conditions of the livestock that feed on the pasture many livestock get weaker and eventually die of starvation Reduced food production in the arable farming areas implies that there is less food available in the markets thus raising the prices of the available food making it out of reach for the poor. Floods also hamper pastoralists' access to food by making it impossible to move food from the food surplus areas to food deficit areas. Food crisis occasioned by ecological disasters are not new in Kenya.

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[89] Ashton, P.J. (2002) .*Avoiding conflicts over Africa's water resources*. Ambio, 31, pp. 236–242. Boko, M., Niang, A.I., Nyong, C., Vogel., Githeko, M.A., Medany, B., Osman-Elasha., Tabo,B. , and Yanda,P. (2007). Africa. In: Parry, M.L., Canziani,O.F., Palutikof, J.P., Linden van der P.J., and Hanson,C.E. (Eds.) *Climate change 2007*: *Impacts, adaptation and vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, Cambridge University Press. Retrieved from http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter9.pdf.
[90] Soper, R.C. (1985). *Socio-Cultural Profile of Turkana District*. Institute of African Studies, The University of Nairobi, Kenya.

In the past one century or so, Kenya is reported to have experienced close to 20 major droughts with varying magnitudes and spatial.[91]

3.3 Human Security

Questions on conflicts and the Turkana community sought to know the causes/ sources, spread, effects, challenges, and opportunities for conflict prevention, resolution and management in Turkana. According to those interviewed, natural resource related conflicts are the dominant disputes in Turkana. Other types of conflicts identified by the respondents were environmental, political, wildlife/human and livestock rustling. Natural resource-based conflicts in Turkana mainly revolve around the question of land, pasture, and watering points. A hundred percent of the respondents noted that natural resource based conflicts in Turkana is hinged on the desire to control, access, and utilize the land related resources of pasture and water. The limitation of these resources has generated stiff competition with other pastoral communities within and across national borders. Likewise, when there is abundant pasture in one area, pastoralists move to such areas and conflict ensues. The question of historical claims to pasture land also arises when pastoralists in search of pasture and water clash with commercial farmers in ranches. Environmental conflicts were another form of conflict in Turkana at the time of research. Environmental conflicts are a consequence of unsustainable utilization of land and the consequent degradation and scarcity of resources. In this regard, due to large number of animals that the community keeps, the existing land and pasture cannot sustain them. Therefore overgrazing normally leads to land degradation and hence exposes the land to

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[91] Naomi, Shanguhyia. (2008), *State Policy and Food Insecurity in Kenya's Arid and Semi-arid Land*, Thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts in Geography at West Virginia University.

climate vulnerabilities, climate change, and related aspects. It was noted that environmental conflicts are in most cases internationalized. This is because IDPs, refugees and small arms were sometimes felt across the national borders.

3.4 Economic influences on conflict

3.4.1 Unfair policies and systematic marginalization by governments:

Within the government and civil society setup in Kenya, there has been a strong and systematic bias against the pastoralist communities in this country. This is expressed in many ways such as the absence of land tenure laws that govern land use and ownership within the pastoralist regions of the country, yet the other agricultural areas are well served by the system complete with title deeds for privately owned parcels of land. The colonial and post-independence administrations have also been largely dominated by the agricultural communities, which therefore hold sway at both policy and decision making levels. The argument that the pastoralist economy offers little in terms of returns as compared to the agricultural economies farther tilts the balance of opportunities to the detriment of the pastoralists. This means that government budgetary allocations for the improvement of this sector are either dismal or non-existent. The laissez faire attitude exercised at policy level ensures that pastoralists and pastoralism survive on the whims of the natural elements and in most instances, totally gets out of control.

3.4.2 Poverty and Under-developed infrastructure

The pastoralist regions of Kenya are largely characterized by limited economic opportunities both within the pastoral sector and outside. In fact, in Kenya's National Poverty Eradication

Plan (1999 2015) the ASALs are rated as the poorest with poverty levels estimated at nearly 80% of the population being poor. In these areas also, there is a poorly developed physical and administrative infrastructure in terms of roads, schools, healthcare safe water and security. Frequent droughts and spells of famine decimate the animal numbers within these communities, forcing some to opt out of mainstream pastoralism in frustration. Faced with limited livelihood options especially for the young men and women, some migrate to the urban centers while others may obtain guns and engage in highway banditry that has increasingly become a common feature in these areas.

3.4.3 Commercialization of Raids

In the days of yore, raids used to be a social pastime for most communities, apart from being a means of restocking. Of late however, this practice has mushroomed into a business activity with individuals not from mainstream pastoralist communities getting involved in the purchase of the spoils of raids. This is one reason that explains the dismal number of animals that are recovered by security personnel after a raid. The animals so obtained are loaded onto trucks and transported to faraway markets from the conflict scene. The lure of ready cash after a raid undoubtedly instils a sense of business in participating youths prompting them to participate more.[92]

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[92] May 2004,Cewarn/IGAD Addis Ababa,Ethiopia

3.5 Political Influences

3.5.1 Bad Leadership and Poor Governance

Pastoralist conflicts should be seen within the broader context of governance. Since the attainment of political independence, the policies pursued by governments have led to the marginalization of pastoralists from mainstream national development. The needs, interests and aspirations of the pastoralist are disregarded in the general planning of national development. In this connection, the state plays an integral role in these conflicts. Pastoralism as a viable economic activity has generally been neglected with pastoralist areas regarded as of no economic contributions to make to the greater national economy. According to Lane and Mooreland (1994) the continued attempts at sedentarization of herders, nationalization of resources and privatization of range attest to this bias towards non-pastoralist groups and economic activities.

3.5.2 Lethargic and Ineffective Responses

State response to pastoralist conflicts has not also endeared it to pastoralists. More often than not, the response is at best lethargic and at worst not there, a policy described as "slow response or non-intervention".[93] Accusing fingers have repeatedly been directed to the governments for the manner in which they intervene in inter-pastoralists conflicts. The blames range from ineffective recovery of stolen stock, biased conduct of security operations to a prejudicial system of justice. Wanjala, writing about the Pokot and Marakwet clashes of

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[93]Fratklin, E (1994): Resurgence of Inter-Pastoralist Warfare in Kenya. A Paper presented to the Panel *Resurgence of Ethnic Conflict and Tribalism in Africa*, American Antropological Association Annual Meetings, Atlanta GA, December 1, 1994

April1997, reports that "…the failure of the government to arrest those responsible"[94] is responsible for the revenge attacks that led to the escalation of the conflict. Similar views have also been reported in conflicts between other pastoralist ethnic groups. The pastoralists find it increasingly difficult to comprehend why it is difficult for the government to abort raids even when it is aware of them or when there are abundant indicators of inter-ethnic tensions. More disconcerting is the tendency that the security forces appear helpless and powerless insofar as pastoralist raiding and banditry are concerned. The nature of states' responses to pastoralist conflicts often gives rise to suspicions that the governmental authorities are tolerating these conflicts and maybe behind them. These suspicions are further reinforced by reports that military vehicles are used for the transportation of stolen stock.[95] If the governments concerned were willing to stop banditry and resolve pastoralist conflicts, these will be things of the past. What is lacking is the political will to stop them. As a result of governments' inaction and ineffectiveness, the communities have taken the advantage by acting as predators preying on other. Another way in which the state's response to pastoralist conflicts is suspect is manner in which they unleash indiscriminate reprisals during security and disarmament operations. The security forces engage in rape, looting, human rights violations and violent reprisals. They carry these indiscriminately and at time they misplace their aggression to innocent civilians and not the bandits or rustlers. This strains the relations between the state and the pastoralists to the point that it is difficult for the pastoralists to co-operate with the security forces and hence, the state. As I have argued elsewhere, the "… security forces, instead of anticipating, limiting or

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[94] Wanjala, T. (1997): Report on the Pokot-Marakwet Clashes. Peacenet-NGO Council, Nariobi.
[95] Kratli S. and Swift, J (1999): Understanding and Managing Pastoral Conflicts in Kenya: A Literature Review.

even ending pastoralist conflicts, seem to be trained to react to them".[96] Kratli and Swift further

add that the violent and indiscriminate response by security forces "appear very much as

primarily directed towards re-establishing the state's unique right to violence, and only

secondarily towards conflict resolution" [97]In a nutshell, the security forces possess a strong

propensity to resort to brutal force, a factor that negates any attempts by the government to

peacefully intervene in conflicts.

3.5.3 The Culture of Impunity

In Kenya, those who over the years have been responsible for livestock rustling, roadside

banditry and murder, have not been brought to justice. There is therefore a legacy of

punishable acts, such as conspiracy and attempt to commit crime, direct and indirect public

incitement to lawlessness, damage to property and murder being unpunished. For the peaceful

co-existence of pastoralist communities, and the political stability of Kenya and the Cluster as a

whole, the perpetrators of these crimes must be brought to justice. And if this culture of

impunity is allowed to continue unabated, the spiral inter-ethnic violence and its attendant

consequences, seems almost bound to be repeated in the future. Needless to say, related to

the culture of impunity is the legacy of mutual fear and suspicion that exists in the social fabric

of pastoral communities. [98]

3.5.4 Government approaches to conflict

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[96]Kona E.S (1999): Customary Conflict Management Mechanisms among the Turkana of Kenya: Implications for Conflict Resolution Discourse and Practice. A Paper presented at the All-Africa Conference on African Principles of Conflict Resolution and Reconciliation, United Nations Conference Centre, Addis Abab, Ethiopia, November 8-12, 2002

[97] Kratli S. and Swift, J (1999): Understanding and Managing Pastoral Conflicts in Kenya: A Literature Review.

[98] May 2004, CEWARN/IGAD, Addis Abeba, Ethiopia

The approach by governments to conflict within these areas also contributes a great deal to the causation of conflict. In times when government has intervened, strong-arm tactics have been employed in disarmament and pacification of communities leaving destruction and vulnerable populations in its wake. This approach farther fuels resentment to government structures and an all-out defiance of the government policies. This has at times also pitted communities against each other where there is perceived or real favoritism towards one community at the expense of the other like in the case of the disarmament exercise in the early 80s targeting the Turkana and Pokot communities, the Turkana felt that the government was more brutal on them while the Pokot arms caches were left largely intact. This exercise made communities more vulnerable to raids from the communities not adequately disarmed.[99]

3.5.5 Relief assistance at the expense of development

Massive relief and humanitarian assistance has been channeled to the pastoralist regions of Kenya over the past several years largely in response to emergencies and drought/famine situations. This assistance has however not been coupled with appropriate sustainable development strategies that would enhance coping at the end of this relief period. The consequence has therefore been that episodes of relief assistance are inevitably followed by an upsurge of newly vulnerable groups driven to dependency by this relief effort. For those who cannot cope, especially so for the youth alternative livelihood options have to be pursued this in many cases may involve participation in cattle raids against neighboring communities or, highway robbery.

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[99] May 2004, CEWARN/IGAD, Addis Ababa, Ethiopia

3.5.6 Regional instability and the proliferation of modern weapons

By some design, most of the areas inhabited by the pastoralist communities of Kenya lie adjacent to regions of political or social instability. From the North Western tip, Turkana borders Sudan and Ethiopia countries that are various stages of internal war and Uganda, that's battling secessionist rebel elements. In the North Eastern corridor, the North Eastern Province borders Somalia and Ethiopia, countries that are still in conflict with their neighbours or groups within them. In this scheme of things, the adjoining pastoralist areas become a fertile ground for the disposal and trade in illegal arms that spill out of these countries. These weapons are in turn used by these communities for matters of their own security and of course, self-enrichment. The widespread availability, illicit transfers, unregulated flows and unlawful use of modern automatic weapons is credited for the escalation of pastoralist conflicts. Unlike in the past when crude and simple implements were used in traditional raiding, modern automatic weapons like Kalashnikov AK 47 assault rifles, ultra-light G3A3 automatic guns and grenades are now in use.
The devastating impacts and misuse of small arms increases the deadliness of pastoralist conflicts. Their proliferation and use results in high casualty rates, indiscriminate killing and have made it easier to exploit young children and women as fighters, posing a monumental threat to pastoralists' security. Pastoralist communities own guns not only to protect them against being plundered by hostile ethnic groups from conterminous countries but also to defend their livestock against other equally armed pastoralist communities. The same guns are used to forcefully dispossess other pastoralists of their stock. While modern automatic weapons could have been the source of security in the past, they have now become a source of

insecurity. Thus, the acquisition of modern automatic weapons is both the cause and consequence of insecurity and conflict in pastoral areas of Kenya. In recent years, they have resorted to using them to protect themselves against security forces particularly during forceful security disarmament operations and during efforts at recovery of stolen stock. [100]

3.5.7 Media

The media is often blamed for inflammatory and unbalanced reporting of conflict events when portraying one community as savages while the other as just innocent victims. Apart from worsening the hostilities between the two communities this still feeds into the institutionalized bias that already exists against the marginalized pastoralist groups them farther.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION.

4.1 Introduction

This chapter presents a summary of the findings collected from the target audience. The data was obtained through the use of questionnaires which were the main tools for data collection used in the study. Tables are used in the analysis and presentation of data. The researcher then gives interpretation. Data analysis was guided by the research objectives presented in chapter one, the study sort to determine the impact of environmental conflict to national security, case study of Turkana. Data analysis was done using descriptive statistics; tables and pie charts were

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[100] May 2004, CEWARN/IGAD, Addis Abeba, Ethiopia

used to support and illustrate the findings. This was based on questionnaires distributed to the target respondents primarily targeting pastoralists and government officials.

4.2 Response Rate.

The returned questionnaires were cleaned, edited and coded. Out of the 60 questionnaires distributed only 1 questionnaire was not returned but on follow up the respondent filled and returned the questionnaire thus leading to a response rate of 100% percent which was good enough to facilitate data analysis. The high success rate in questionnaire response was facilitated by explaining to participants the importance of the study and assuring them of confidentiality. From the table above the response rate of respondents is 100%. The response rate is adequate and sufficient for the study and for the purpose of data analysis.

4.3 Sample demographics

The demographic characteristics of respondents were discussed and analysed in terms of marital status, age, gender, respondents occupation, level of education

Table 4.1: Gender Response Rate.

Sample under study was analysed in terms of gender; it was found out that, 70% were males and 30% were females as per Table 4.1

Gender	Frequency	percentage

Male	42	70
Female	18	30
Total	**60**	**100**

Source: Author (2015)

Table 4.2: Age

Age of the respondents	Frequency	Percent
19-29 years	5	8
30 to 39 years	22	37
40 to 49 years	28	47
50 to 59 years	3	5
60 and above	2	3
Total	**60**	**100%**

Source: Author (2015)

Majority 47% of the respondents interviewed were in the age bracket of 40-49 years followed by those in the age bracket of 30 - 39 years at 37% then 19-29 years at 8% finally 50 - 59 years at 3% and only 2% of above years. The analysis shows that majority of the respondents were thus between the ages of 40-49 years followed by 30 to 39 years.

Table 4.3: Occupation

The respondents were also asked what their occupation were. Table 4.3 below indicates that 11.7% of the respondents are farmers, 16.7% are fishermen, 50% are pastoralists, 16.7% civil servants and 5% do not engage in any occupation.

Occupation/Industry	Frequency	Percent

Pastoralist	30	50
Civil servants	10	16.7
Farmers	7	11.7
Fishermen	10	16.7
None	3	5
Total	**60**	**100**

Source: Author (2015)

Table 4.4: Marital status

Marital Status	Frequency	Percentage
Single	5	8.3
Married	40	66.7
Divorced	3	5
Widowed	10	16.7
Separated	2	3.3
Total	**60**	**100**

Source: Author (2015)

Out of the 60 respondents interviewed, 66.7% were married (40) followed by those who are widowed at 16.7% (10), 8.3 %(5) single, 5 %(3) divorced while only 2 respondents were separated.

4.4 Livelihood of the households

The respondents were asked whether livestock keeping was their sources of livelihood. Table 4.5 indicates 66.7% of the respondents strongly agree that they rely on livestock for livelihood,

25% agree that rely on livestock, none of the respondents disagree while 8.3% strongly disagree that they rely on livestock as their source of livelihood.

Table 4.5 Livestock as source of livelihood

	Strongly agree	Agree	Disagree	Strongly Disagree	TOTAL
Frequency	40	15	0	5	60
Percentage	66.7	25	0	8.3	100

Source: Author (2015)

Table 4.6 Farming as a common source of livelihood

	Strongly agree	Agree	Disagree	Strongly Disagree	TOTAL
Frequency	9	6	15	30	60
percentage	15	10	25	50	100

Source: Author (2015)

Table 4.6 indicates 50% of the respondents strongly disagree that they rely on farming as their common source of livelihood, 25% disagree that rely on farming, 10%agreed while 15% strongly agree that they rely on farming as their source of livelihood.

Table 4.7 Land ownership

	YES	NO	TOTAL
Frequency	46	14	60
Percentage	76.7	23.3	100

Source: Author (2015)

The researcher sought to find out that 76.7% of the respondents had land while only 23.3% didn't own land, though they still relied on livestock as their source of livelihood.

4.4.1 Focus Group Discussion

The researcher found out that those who relied on livestock was not out of their own will, in the discussion held they said that they didn't have the knowhow on how to practice farming though they had plenty of land. The researcher found out that the respondents would rather the government reclaims land under irrigation as this means they will engage more in farming activities and reduce reliance on livestock keeping as their source of livelihood. Those who relied on farming as their source of livelihood said that extension officers be deployed in the area to train them on modern ways of farming.

4.5 Conflict issues

The researcher sought to find out about conflict situation in Turkana. The respondents were asked if it was easy to own a title deed and the reason why they thought it was easy or not. It was found out that, 1.67% of the sample population strongly agree that it was easy to own /acquire a title deed, 1.67% agreed that it was easy own/acquire a title deed, 1.67% disagreed while 95% strongly disagreed. Those who strongly disagreed said that the land was communal.

Table 4.8 Ownership of title deed

	Strongly agree	Agree	Disagree	Strongly disagree	Total
Frequency	1	1	1	57	**60**
Percentage	1.67	1.67	1.67	95	**100**

Source: Author (2015)

The respondents were further asked if they owned fire arms and how they acquired them. 20% of the respondents said they owned a riffle while 80% did not own one. The respondents who owned riffles were reluctant to disclose how they acquired the riffles for the fear of their lives.

Table 4.9 Possession of fire arms

	Yes	No	Total
Frequency	12	48	**60**
Percentage	20	80	**100**

Source: Author (2015)

The researcher further sought to find out if there were cases of cattle rustling, and it was noted that 68.3% of the respondents felt that cattle rustling was extremely common, 15% said that it was a very common thing, 8.3% said it was not common, while 8.3% also were the opinion that it was not a very common occurrence. The researcher further found out that the reason why it

was an extremely common occurrence is because very many members of the community owned cattle. This included the chiefs and clan elders.

Table 4.10 Cattle rustling occurrence

	Extremely common	Very common	Not common	Not very common	**Total**
Frequency	41	9	5	5	**60**
Percentage	68.3	15	8.3	8.3	**100**

Source: Author (2015)

The researcher found out from the respondents who said that cattle rustling was extremely common that it occurred mostly at the time of drought and famine and also during traditional marriages.

Table 4.11 Season of extreme occurrence

	Political instability	Drought and Famine	Traditional Marriages	**Total**
Frequency	6	29	25	**60**
Percentage	10	48.3	41.7	**100**

Source: Author (2015)

The researcher found out from the respondents that conflict extremely occur during drought and famine, followed by seasons of traditional marriages and at the least during political instability.

Table 4.12 Availability and access to food, water, pastures in relation to conflict and insecurity

	Strongly agree	Agree	Disagree	Strongly Disagree	**Total**
Frequency	32	16	7	5	**60**
Percentage	53.3	26.7	11.7	8.3	**100**

Source: Author (2015)

The researcher found out that limited food, water and pasture was a major contributor of conflicts in the area.

Table 4.13 Climate change and insecurity

	Strongly agree	Agree	Disagree	Strongly disagree	**Total**

Frequency	45	15	0	0	**60**
Percentage	75	25	0	0	**100**

Source: Author (2015)

The researcher found out from the respondent that due to change of climate the food, water

and pastures was less and thus enhancing conflict as it was the issue of survival for the fittest.

Table 4.14 Government role in management of conflict

	Strongly agree	Agree	Disagree	Strongly disagree	**Total**
Frequency	3	5	8	44	**60**
Percentage	5	8.33	13.3	73.3	**100**

Source: Author (2015)

The respondents were asked if the government has done enough in management of conflicts.

This was asked so as to gauge what measures can be put in place to enhance conflict

management and other policy makers. 5% of the respondents strongly agree that the

government has played an important part,8.33% of the respondents agreed, 13.3 disagreed

while 73.3% strongly disagreed that the government has played any part in enhancing conflict

management.

Table 4.15 what the government should do to prevent conflicts

What the government should do to prevent conflicts	Aggregated percent
Adhere to migration rules and stick to them strictly	86.6%
Have fully equipped police service with necessary training	91.7%
Come up with programme on agriculture	96.7%
Drilling of boreholes	96.7%
Disarmament	93.3%

For this particular question respondents had an option of ticking more than one question, coming up with programmes on agriculture and drilling boreholes was the highest supported with 96.7% they were followed by 93.3% who felt that police disarmament was necessary to prevent conflict. The least aggregated percentage was recorded with respondents who felt that migration rules and sticking to them strictly should be adhered to, this was at 86.6%. From the analysis, the government should act with speed on ensuring that programmes on agriculture and drilling of boreholes are introduced in combating conflicts.

4.5.1 Focus group discussion

The researcher sought to find out how conflicts can be reduced in the area. The respondents said that there was need to create awareness of the impacts of conflicts at the same time engaging in peace initiatives and conflict resolution. They expressed the need for disarmament

and the government tightening security in the region and to protect the vulnerable people. The respondent said that if the government can implement their policies and strategies that they have put in place like drilling of boreholes for places where there is no water and also coming up with agriculture programmes so that the community in question can stop relying only on pastoralism/livestock keeping.

CHAPTER FIVE

Summary, Conclusion, and Recommendations

5.1 Introduction

This chapter provides a summary of findings, conclusions and recommendations for further research and policies that need to be taken into consideration. The researcher then draws conclusions by comparing study findings and literature review. The study set to interrogate the interface between environmental conflict and national security and its implication on the livelihood of pastoral communities in Turkana Kenya, it interrogated the theoretical and practical linkages between environmental conflict and national security and the relationship between the two and the management structures for addressing conflicts in the area. The study summarizes and concludes the key issues emerging from the study and ends with

recommendations of areas for further research. Specifically, it provides an overview of the current state of knowledge on conflicts, environmental vulnerability and security, and revisits the core conceptual and empirical issues that framed the study.

5.2 Summary

This study which is about the links between environmental conflict and national security among pastoralists in Kenya and particularly the Turkana community is anchored within the modified Thomas Homer-Dixon's environmental scarcity theory. The theory which is customized to suit the pastoral setting used both primary and secondary data. The study has established that there is a linkage between environmental conflict and national security within the context of the pastoral communities in Kenya. However, this link is not obvious; instead, it requires a careful identification of specific aspects that cause environmental conflict and insecurity and their impact on pastoral livelihood. The pastoral economy is very narrow and relies principally on livestock rearing and therefore is more vulnerable when one or several conditions prevail. Not only are the incomes and means of livelihood held hostage the environmental stress and climatic conditions but also options for diversification are limited. The Turkana case demonstrates how the steady reduction of pasture and watering places coupled with rapidly increasing human and livestock population against the backdrop of governance deficit is one of a cluster of stresses that has driven the community into constant conflicts that characterizes the pastoral zones.[101] Pastureland, water and access to routes are the main issues of contention. The desire to control trade routes and market places is a constant factor in the pastoral livelihood. Livestock raiding is a traditional practice whereby herds depleted by droughts, floods, disease or raiding are replenished but also where young men acquire animals to pay pride price ostensibly to mature to

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[101] Khadiagala, G. (2003) Op Cit and Aguirre, F. H (2011) 'Op Cit

manhood. Raiders are also motivated by the fact that more marks one has that are occasioned by more successful raids, the more popular and respect one gets from the community and the more women he is likely to marry.[102] Therefore, raiding demands good reliable small arms to enable the male and his kin to raid more cattle because their power not only overwhelms and intimidate the cattle owners but also minimizes the risk of getting caught. This is because unprepared owners prefer to let the livestock go rather than fight armed raiders.[103] The current volumes of illicit small arms in the IGAD region are a consequence of the political instability that has characterized it for over decades and the Cold War environment.[104]The militarization of the pastoral areas is largely a consequence of years of bad governance, weak government administration and lack of effective natural resource utilization and management frameworks in pastoral areas.[105]This has in turn created zones of insecurity in which lawlessness, deprivation of life and property and gun-wielding culture has thrived. However, the Centre faces both legal, institutional and policy bottlenecks that need to be addressed. Key among these is the slow pace of the Member States to fully implement the provisions of the documents, limited human and technical capacity at the Centre as well as at national level, lack of a regional strategic plan to guide its operations and the endemic conflicts in the region which provides a enabling environment for the continued flow and circulation of illicit small arms in the region and unpredictable interstate relations. On environment conflict, the study concludes that there are some aspects of environmental conflict that may be addressed well if environment is securitized while there are some technical and mundane aspects such as those related to theoretical

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[102] ibid

[103] Marwa P. '(2002), Op Cit.

[104] Makinda, S.(1982)"Conflict and the superpowers in the Horn of Africa" Third world quarterly 4(1): 93-103

[105] Mkutu, K.. (2005), *Pastoral Conflicts, Governance and Small Arms in the North Rift, Northeast Africa*, (Unpublished PhD Thesis, University of Bradford,) and Amene A. 2009, 1 *Cattle Rustling a Leadership Crisis.* Nairobi: Mifugo Project, ISS

development that will require some focused attention away from the realm of the expanded notion of security. The study notes that scarcity of pasture, water and other related resources, weak and limited state structures and institutions of governance as well as the erosion of traditional value systems and the authorities that enforced them combine in an intricate web of complexity that contributes towards conflict and environmental insecurity that characterizes the pastoral landscape. Furthermore, conflict driving factors, environmental insecurity generating factors coupled with governance deficit combine in a very complex manner to shape and in a very crucial way influence the livelihood of the pastoral communities.

5.3 Conclusion

From the analysis and particularly on the on the objectives of interrogating the theoretical and practical linkages between environmental conflict and national security, examining the nature of the relationship between environmental conflict and national security and among the pastoral communities in Kenya including the corresponding research questions, the study concludes that there is a link between environmental conflict and national security The form and the nature of the link is double edged i.e. conflict elements can cause environmental security and verse versa but it is important to identify specific conflict causing factors and likewise environmental security specific factors because of the existence of many interrelated factors. Succinctly, one must examine very specific conflict generating factors and environmental conflict factors to determine the relationship. Practically, it means that governance deficit breads conditions for conflicts and environmental insecurity. The study refutes the notion that conflicts among the pastoralists are mainly a consequence of the scarcity of resources and environmental stress and instead acknowledges a combination of various factors behind insecurity in pastoral areas but more fundamental identifies governance deficit as the missing gap. Furthermore, the study does

not only affirm the theoretical prepositions to the environmental conflict thesis and scarcity driven explanations of violent conflict fostered by environmental conditions, but also notes that conventional, traditional institutional and legislative frameworks for conflict prevention, management resolution related to resources are important considerations. The study concludes that conflicts in pastoral areas can be explained approximately three interconnected factors, i.e. i) unhealthy competition over resources ii) weak and/or absence of governance structures and iii) under-development. These are catapulted by several factors such as; i) climate change and variability, ii) population increase ,iii) acquisition of small arms, iv) policy issues, v) lack of harmony of the traditional justice system and the conventional judicial system, vi) governance and historical issues, vii) political and security environment at the regional level and viii) generation of ecological refugees. Conflicts occur at multiple levels and include inter communal, inter-district, national, regional, and cross border with multiple causes that includes culture, and environmental conditions From the study findings, it can be concluded that indeed pastoral communities in Kenya will continue to suffer the effects of conflicts some of which are related directly to environmental security while the underlying reason is the institutional and legislative failure. This is likely to be worsened by the ever emerging challenges and sometimes little understood challenges of the climate change. The link between environmental conflict and security will become even clearer as the effects of climate change and variability become more visible within the pastoral setting. It is bound to continue for some unforeseeable future given the fact that the policy makers despite acknowledging the effects of climate change, they are yet to understand the magnitude of the problem and how to deal with the consequences and more so with respect to the pastoral areas. Until now, authorities continue to treat the pastoral issues as purely developmental as well as cultural. Furthermore, the study notes there are links between

environmental conflict and security against the backdrop of a governance deficit manifested in historical neglect, weak and limited state presence worsened by the geographical continuity across international borders of Uganda, South Sudan and Ethiopia. The centrality of all conflicts in pastoral areas is the question of governance. The state has failed to formulate and implement appropriate policy interventions to improve pastoral livelihood even at certain point it envisages the elimination of pastoralism to be replaced by sedentary livelihood. In this regard, the study concludes that the problem of conflict and environmental insecurity among the pastoral communities in Kenya is largely an outcome of the inability of the post-colonial state to extend its legitimate institutions of governance and relevant development programs to these marginalized areas and to improve human security in pastoral areas. Consequently, the study concludes that factors related to land tenure system; development imperatives and environmental security among others are largely the outcome of governance deficit. This places governance at the heart of security and developmental problems facing pastoralists in Kenya. In some instances, environment can directly affect security and be identified as the proximate cause of a conflict. More typically, however, environmental impacts, though significant tend to be intervening variables that produce indirect effects that act in concert with more traditionally recognized elements of security such as living conditions, food security, economic growth, and socio economic and political stability. Environmental stress associated with deforestation, soil erosion, water scarcity, climate variability, and natural hazards place essential natural resources at risk. However, though pastoral lands have higher than average levels of poverty and insecurity, they possess rich biodiversity, mineral resources, livestock and products such as gums, resins, dyes, honey, medicines and cosmetics, which if exploited will ameliorate the factors that lead to conflicts and promote environmental insecurity. Conflicts over natural

resources are embedded in a tangle of ecological conditions and regulation mechanisms for their management and utilization. In conclusion, this study refutes the common notion that violent conflict in pastoral areas is a direct function of resource availability as determined by a host of factors such as climate change, environmental conditions, drought and famine. The central thesis is that the linkage between environmental conflict and security is critical in understanding and making a meaningful contribution to the state of human security in pastoral areas. This calls for an effective engagement with the ecological, socio-economic and political factors that affects the pastoral systems of production in arid and semi-arid areas of Kenya and the IGAD region as a whole.

5.4 Recommendations

Conflict and environmental security generating factors are closely intertwined, very complicated and combine in a very complex and crucial way to shape and influence the livelihood of the pastoralists. The solution to the perennial environmental conflict and insecurity lies largely in the promotion of good governance that will ensure effective institutional, normative, policy and administrative frameworks for sustainable exploitation, utilization and management of the resources (water pasture) including security within the pastoral areas and not in providing them abundantly and while taking into account the contemporary regional and global issues in time and place. The prevalent of conflicts and the declining environmental security in pastoral areas is a result of a combination of factors that include unhealthy competition over natural resources particularly water and pasture, worsened by unfavourable and harsh climatic condition coupled by weak/lack of effective management and utilization mechanisms shows that solutions to human insecurity in pastoral areas should be multifaceted that takes into account the connection between conflict, security and development including cultural issues. Consequently the study

recommends that interventions should address not only the root causes of conflicts but also triggers and accelerators. This should include the promotion of good governance to ensure effective institutional, normative, policy and administrative frameworks for sustainable exploitation, utilization and management of the resources (water pasture) including security within the pastoral areas and not in providing them abundantly and cannot be divorced from the contemporary regional and global issues in time and place.. The over-dependence on pastoralism as a source of livelihood remains a major challenge facing the pastoral communities. It means that unless livestock keeping is improved and more alternative sources of livelihood strategies adopted, pastoral land will soon reach appoint of no return (where it will not be able to support any livelihood) with devastating consequences to the pastoralists, their economy and the entire country. This means increased pastoral/agriculturists conflicts as the former will move into agricultural lands in search of water and pasture. Therefore the study recommends that policy makers should not only improve the livestock sector by creating an enabling environment for veterinary doctors to invest including marketing but also exploit the significant portion of other resources including farming to provide alternative sources of livelihood.

5.5 Recommendations for further study

The researcher recommends further research in the following areas;

> 1. Conflict and poverty

> 2. Climate conditions

> 3. Natural resources and conflict

Further the researcher suggests that the above will greatly add in the knowledge gap as the

residents' coping mechanisms to climate conditions would also affect security and over reliance

on livestock.

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APPENDICES

APPENDIX I: LETTER OF TRANSMITTAL

Gitari Beatrice Njeri

P.o Box 1945

Nyeri

Dear Sir/Madam

You are invited to participate in this study that constitutes a part of Master of International Conflict Management research project at the University of Nairobi. The study is about environmental conflict and its influence on national security. Your answers will be completely anonymous and confidential. Your contributions will be highly appreciated.

Thank you very much in advance

Yours Faithfully

Beatrice N Gitari

<p align="center">APPENDIX II</p>

A QUESTIONNAIRE ON ENVIRONMENTAL CONFLICT AND NATIONAL SECURITY IN KENYA: A CASE STUDY OF TURKANA COMMUNITY

Questionnaire   **no._____**

INTRODUCTION.

Thank you for taking time to participate in this research by answering the questions. It will require 20 minutes of your time. This research is purely for academic purposes and will not be used in any other forum apart from policy recommendations in the area of environmental conflict and national security in Kenya in Turkana community. Anonymity and Confidentiality will be observed. Please answer the questions as truthfully as possible to the research assistants administering the questionnaire.

PART A: PERSONAL DETAILS

GENDER

MALE   ☐

FEMALE   ☐

AGE IN YEARS: _____

OCCUPATION:

(a) Pastoralist   ☐

(b) Civil servant   ☐

(c) Farmers   ☐

(d) Fishermen   ☐

(e) None   ☐

MARITAL STATUS:

Single   ☐

Married   ☐

Divorced   ☐

Separated   ☐

Widowed   ☐

PART B: INFORMATION ON LIVELIHOOD

1. Is livestock keeping part of your livelihood?

(a) Strongly agree   ☐

(b) Agree   ☐

(c) Disagree   ☐

(d) Strongly disagree ☐

2. Is farming a common source of your livelihood?

(a) Strongly agree ☐

(b) Agree ☐

(c) Disagree ☐

(d) Strongly disagree ☐

3. If Yes in (2) above, what crops are commonly grown? _____

_____

4. Do you own a piece of land?

Yes ☐   No ☐

PART C: INFORMATION ON CONFLICTS

5. In your opinion, a title deed is easily acquired

(a) Strongly agree ☐

(b) Agree ☐

(c) Disagree ☐

(d) Strongly disagree ☐

6. If strongly disagree in (5) above, what is the reason? _____

_____

7. Do you possess a gun/riffle?

Yes   ☐

 No   ☐

8. If Yes in (7) above, how did you acquire it? _____

_____

_____

9. Is cattle rustling a common occurrence?

(a)Extremely Common   ☐

(b)Very Common   ☐

(c)Not common   ☐

(d)Not Very Common   ☐

10. If Extremely Common in (9) above, during what occurrences does it happen?

(a) Political instability   ☐

(b) Drought and Famine   ☐

(c) Traditional Marriages ☐

11. Do you agree that limited access to pastures, food and water as one of the major reasons of conflicts?

(a) Strongly agree ☐

(b) Agree ☐

(c) Disagree ☐

(d) Strongly disagree ☐

12. Do you agree that climate change has any relationship with insecurity?

(a) Strongly agree ☐

(b) Agree ☐

(c) Disagree ☐

(d) Strongly disagree ☐

13. Which of the following statements best describes what the government should do to combat conflict?

(a) Adhere to migration rules and stick to them strictly ☐

(b) Have fully equipped police service with necessary training ☐

(c) Come up with programmes on agriculture ☐

(d) Drilling of boreholes ☐

(e) Disarmament ☐

Others………………………………………………………………….

………………………………………………………….

14. Do you agree that the government has done enough in the management of conflict?

(a) Strongly agree ☐

(b) Agree ☐

(c) Disagree ☐

(d) Strongly disagree ☐

PART D: GROUP DISCUSSION

15. What do you think should be done to improve the issue of environmental security?

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16. Has the government done enough to eradicate poverty? How?

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17. What do you think should be done to reduce conflict among the pastoral communities?

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18. How do you think the policy implementation can be improved?

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