

**EVALUATION OF THE IMPACT OF ENVIRONMENTAL CONFLICT ON
SOCIO-ECONOMIC DEVELOPMENT IN KURESOI SUB COUNTY KENYA**

PROJECT

BY

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R52/81428/2015

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**A RESEARCH PROPOSAL SUBMITTED TO UNIVERSITY OF NAIROBI IN
PARTIAL FULFILLMENT FOR THE DEGREE OF MASTER OF ARTS IN
INTERNATIONAL CONFLICTS MANAGEMENT**

OCTOBER, 2017

DECLARATION

I, **James Kipng'eno Ronoh** hereby declare that this research is my original work and has not been presented for a degree in any other University.

Signed..... Date.....

James Kipng'eno Ronoh

This project proposal has been submitted for examination with my approval as University Supervisor;

Signed..... Date.....

Dr. Shazia Chaudry

DEDICATION

I dedicate this research project to my family for the love and support you shown me all throughout the writing of this research work.

ACKNOWLEDGEMENT

I wish to thank the Almighty God for His protection, guidance, strength, favour and direction throughout my education.

I would also like to specially thank my supervisor for having agreed to supervise this research paper and his unwavering patience in reading the drafts and occasionally guiding me, without which the research would not have been a reality.

Lastly I wish to express my sincere appreciation to my family for their understanding and undaunted support during this research proposal.

ABSTRACT

Environment issues especially on land are a fundamental aspect of structural conflicts in Kenya but they have also often degenerated into physical violence. Land has been the crux of economic, cultural and socio-economic change in Kenya. Following years of an inappropriate land tenure system, a large segment of the population continues to have difficulties not only in adapting to the modern agrarian economy but also in coping with the increasingly fragile and marginal environment, land degradation, low agricultural output and intensifying conflicts over access to and control of land. Violence over land has occurred sporadically in different parts of the country, and doubts over the worthiness of land titles almost caused major economic instability a few years ago. This research explored the impact of environmental conflicts on socio-economic development in Kuresoi Sub-county in Kenya. The key objectives were; to explore the root causes of environmental conflicts that undermine socio-economic development. Secondly, was to determine the effects of environmental conflict on the socio-economic developments and finally it sought to examine the efficacy of mechanism to resolve environmental conflicts in Kuresoi sub-county Kenya. The findings from this study is of great significance to government agencies, society at large and future scholars. The study adopted a descriptive research design with the target population of Kuresoi residents. Simple random sampling was applied to collect information. The study used both primary and secondary data to arrive at empirical conclusions. The study found that socio-economic development is significantly associated with increased environmental degradation both in the short run and the long run. The study also found that Kuresoi is highly vulnerable to climate change related impacts because of lack of vibrant institutions championing climate change adaptation and mitigation, lack of climate knowledge sensitisation mechanism, poor land use methods, poor urban-rural planning, poor government policies regarding climate change and rapid population increase resulting to stagnation of socio-economic development. The study recommends that there is the need for the government to get ready and act now if anything to do with current or future climate change mitigation and adaptation is to be achieved. The study further recommends that there is need for the government, climate sensitive institutions and learning institutions to enhance research activities tailored at advancing climate change related ideas which will be instrumental in advocating for future methods of adapting to climatic changes at the same time coming up with new mitigation methods.

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
ABSTRACT.....	v
TABLE OF CONTENTS	vii
ABBREVIATIONS.....	ix
CHAPTER ONE	1
INTRODUCTION TO THE STUDY.....	1
1.1 Background of the Study.....	1
1.2 Statement of the Research Problem	3
1.3 Research Questions	5
1.4 Research Objectives	6
1.5 Literature Review	6
1.6 Gaps in Literature Review.....	16
1.7 Hypotheses of the Study.....	17
1.8 Justification of the Study.....	17
1.9 Theoretical Framework	18
1.10 Research Methodology.....	22
1.11 Chapter Outline	25
CAUSES OF ENVIRONMENTAL CONFLICTS IN KURESOI KENYA	27
2.1 Introduction	27
2.2 Development of Economic Conflict.....	27
2.3 Economic Conflict in Kenya.....	38
2.4 Economic Conflict in Kuresoi Sub-county	49
2.5 Conclusion.....	62
EFFECTS OF ENVIRONMENTAL CONFLICT ON THE SOCIO-ECONOMIC DEVELOPMENT IN KURESOI SUB-COUNTY, KENYA	63
3.1 Introduction	63
3.2 Key Pillers of Socio-Economic Development	63
3.3 Economic Conflict on Development in Kenya: Key Issues/ Challenges	66
3.4 Economic Conflict on Development in Kuresoi, Kenya.....	70
3.5 Conclusion.....	72

CHAPTER FOUR.....	74
EFFICACY OF MECHANISM TO RESOLVE ENVIRONMENTAL CONFLICTS	74
4.1 Introduction	74
4.2 Mechanism Adopted to Resolve Environmental Conflicts	74
4.3 Other Emerging Issues	88
4.4 Chapter Summary.....	92
CHAPTER FIVE	94
CONCLUSION	94
5.1 Key Findings	94
5.2 Recommendations	97
REFERENCES.....	98
APPENDICES	109
Appendix I: Interview Guide.....	109

ABBREVIATIONS

ASALs:	Arid and Semi-Arid Areas
ENCOP:	Environmental Conflict Project
FAO:	Food and Agriculture Organization
GDP:	Gross Domestic Product
IEA:	International Energy Agency
KEFRI:	Kenya Forestry Research Institute
KFS:	Kenya Forestry Service
KNBS:	Kenya National Bureau of Statistics
KWS:	Kenya Wildlife Service
LSK:	Law Society of Kenya
MENR:	Ministry of Environment and Natural Resources
OPEC:	Oil producing and Exporting Countries
OWC:	Ogiek Welfare Council
PC:	Provincial Commissioner
PRA:	Participatory Rural Appraisals
SPSS:	Statistical Package for Social Sciences
UN:	United Nations
UNCED:	United Nations Conference on Environment and Development
UNEP:	United Nations Environmental Program
UNSO:	United Nations Sudano-Sahelian Office

US:

United States

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Background of the Study

Environmental conflicts are lack of agreements on the uses of water, pasture, land and forests which are environment's natural resources.¹ They include the daily ways of life for the people. If these conflicts are not taken to account can result to violence, environmental degradation and limited livelihood.² Renewable and non-renewable natural resources have conflict generating potential. Firewood, water, fish and land crops are the renewable natural resources while petroleum and minerals are the non-renewable natural resources.

A report by United Nations Sudano-Sahelian Office (UNSO) shows that shortages of land for farming, fresh water and fish, are the ones that lead to the highest level of violence.³ This is mostly due to deficiency of efficient aspects of dispute resolutions that are followed by the people in the administration of resources mentioned above.⁴ Environmental conflicts occur in various ways which include political, social, economic, religious or territorial conflicts as reported by Environment and Conflicts Project (ENCOP). Environmental

¹ World Bank (2015): West Africa Agricultural Productivity Program (WAAPP) Project (Burkina Faso, Ghana, Mali, Senegal): environmental and social management framework plan (ESMFP). Report Number E1553, 13-44.

² Matiru V. (2000) Conflict & Natural Resource Management, Food & Agriculture Organization (FAO); Buckles D and Rusnak D(1999) "Cultivating Peace: Conflict and collaboration in Natural Resource Management" IDRC/World Bank 1999 p. 3 & 4; 41-72.

³ UNSO (2016). *Drought Preparedness and Mitigation in Sub-Saharan Africa*. New York: United Nations Office to Combat Desertification and Drought.

⁴ Gizewski, P (1997) Environmental Scarcity and Conflict, Toronto, Canadian Security Intelligence Service P. 1.

degradation mostly leads to these conflicts. However according to ENCOP these conflicts are not only caused by the environmental predicaments.

In Africa, there has been cases of environmental conflicts which have yielded negative results.⁵ For instance, In the Niger Delta around the oil-rich region has been faced with environmental conflict. This conflict has been globalized. Global actors have contributed to this strife in the Nigerian Oil industry. In Nigeria, there has also been scrabbles for scarce land, profitable returns investment and the human rights. There have been efforts to ensure uninterrupted exploitation of oil. Exploitation of still continues, state refrainment, conflict over oil and land and waters where oil is mined.⁶

Kenya has also experienced environmental conflicts in different parts of the country.⁷ Several studies done have showed how much the people of Kenya value land and that according to Akiwumi is dangerous and might be the cause of conflict. Akiwumi's report continues to indicate that the introduction of a multi-party system of politics was interpreted by some as a way of seizing land from them. This system of politics was greatly influenced by tribal differences with majority of them underlying their thoughts on making it possible to influence the people on dropping it thus causing tribal conflicts.⁸

⁵ UNDP (2016). *Report on the Status of Drought Preparedness and Mitigation in Sub-Saharan Africa. United Nations (Volume 1)*. New York: Office of Combat Desertification and Drought, United Nations Development Programme (UNDP). 51-112.

⁶ Obi, Cyril. 1999. "Globalization and Environmental Conflict in Africa." *African Association of Political Science* 4 (1) 9-38.

⁷ Republic of Kenya (2016). *Development Policy for the Arid and Semi-Arid Lands (Asal)*. Nairobi: Government Printer, Kenya. 111-129.

⁸ Akiwumi, A.M. Report of the Judicial Commission Appointed to Inquire into Tribal Clashes in Kenya, 31st July, 1999. 38-55.

Due to the way of socio-economic growth and its reliance on utilization of natural resources, environmental conflicts need to have a solution, so as to attain sustainable growth at the end.⁹ So as to attain peace and security as the end results, there is great need to find environmental conflict resolutions in all states and communities in the world. Environmental security is the general adoption of both traditional and modern ways that include use of military power and threats brought about by the population growth which leads to the decrease of goods and services. To attain national peace and security, the most important thing is to ensure a solution is found on environmental conflicts.¹⁰

1.2 Statement of the Research Problem

Several impacts are prone to take place once environmental conflict strikes.¹¹ This impact include both physical and social economic harm influencing the natural resource base and humans which the end result is seen on stagnated economic development. Environmental conflict include; scarce water resources, unpredictable rain patterns, draught, insecurity as a result of cattle rustling, inter-ethnic conflicts, poor inter-ethnic relations, forced human displacements, loss of human life, havoc as destruction of and slowed economic growth. The above mentioned conditions end up straining households and their coping strategies. Communities like those leaving in Kuresoi Sub- county are highly exposed to such vices

⁹ Okwiri, J. (2013). Environment, population growth and productivity in Kenya: A case study of the Machakos District. *Development Policy Review* 10:359-387.

¹⁰ Daniel Schwartz & Ashbindu Singh, Environmental conditions, resources and conflicts: An introductory overview and data collection (UNEP, New York, 1999) 3-7.

¹¹ Swain, A. (2015). Environmental Migration and Conflict Dynamics: Focus on Developing Regions. *Third World Quarterly*, 17:959-973.

as the area according to the Economic Survey lack the necessary resources and infrastructure to cope with such shocks.¹²

Kuresoi vulnerability contexts is exposed by limited resources as a result of environmental conflict caused by human destruction of the environment key being deforestation results in increased environmental degradation leading to high levels of risk and poverty.¹³ This has resulted to the dwellers to fall in the poverty trap. The result of the impact is manifested thorough community conflict as the area has witnessed interethnic animosity resulting in violent clashes between 1991, 1992, 1997 and 2006.¹⁴ Kuresoi has been the worst hit area in the Rift region especially because of the violence that has been happening from time to time that evolved after the 2005 referendum and the worst figures of massacre were recorded during the 2007 Kenya general elections. A study by KNBS shows that the reason behind this conflicts was as a result of communities in the locality competing for declining resources triggered by environmental conflict.¹⁵

To note the area has experienced server drought in 1983, 1992, 2004 and 2009. Major floods have occurred in 1991, 2000, 2005 and in 2010 this two occurrence have greatly

¹² RANTCO, Research and Training Consultants (2016). *ALRMP Study on Land Tenure and Resource Management in Kenya. Legal Framework on Pastoral Land tenure and Legislation for the Arid Lands of Kenya*, Republic of Kenya, Office of the President, Department of Relief and Rehabilitation, Nairobi.

¹³ Oxfam. (2016). Survival of the fittest pastoralism and climate change in East Africa. Oxfam Briefing Paper 116, Oxfam International 131-384.

¹⁴ Kenya Land Alliance, (2010), “National Land Policy in Kenya: Addressing Historical Injustices”. Issues Paper No. 2, 51-66.

¹⁵ Kenya National Bureau of Statistics (2016). Kenya Household and Economic Survey Report, Government Printer, Nairobi, Kenya

impacted on the planting patterns of the area.¹⁶ The continuous change of weather patterns and drought has affected the agricultural activities resulting to hunger. Factories located within Kuresoi sub-county such as Kiptagich Tea Factory was greatly affected as a result of low production as tea plantations had dried up. Tourism sector in the area was also affected as the Mau Forest was impacted by the extreme events as monkey species of different kinds migrated to other areas due to human/wildlife conflict as drought was rampant and food was scarce.¹⁷ The socio-economic development of the area was highly affected resulting to major impact on the socio-economy of the sub-county.

Kuresoi economy is highly dependent on agriculture, energy and tourism and there is need to ensure the environment is sustained and improved in order to ensure Kenya Vision 2030 is achieved.¹⁸ If adaptive environmental conflict mitigation measures are not found the future socio-economic development of the area will be greatly affected. Impacts could threaten past development gains and constrain future socio-economic progress. This thus validates the need for a study to evaluate the impact of environmental conflict on socio-economic development in Kuresoi sub county, Kenya.

1.3 Research Questions

This study will seek to answer the following questions;

¹⁶ Republic of Kenya (2010). *Nakuru County Development Plan 2010-2015: Effective Management for Sustainable Economic Growth and Poverty Reduction*. Nairobi: Government Printer, Kenya.

¹⁷ Kenya Wildlife Service (2015). *Human wildlife conflicts, sources, solutions and issues*. [www document] available at: <http://www.safariweb.com/kwild/wildlife.htm>.

¹⁸ Kioko J. & Okello M. (2015). Land use cover and Environmental changes in a Semi-arid range Land, Southern Kenya. *Journal of Geography and Regional Planning* Vol. 3(II), PP 322-326

- i. What are the root causes of environmental conflicts that undermine socio-economic development in Kuresoi sub-county Kenya?
- ii. Which are the effects of environmental conflict on the socio-economic developments in Kuresoi sub county Kenya?
- iii. To what extent are efficacy of mechanism to resolve environmental conflicts employed in Kuresoi sub- county Kenya?

1.4 Research Objectives

1.4.1 General Objective

The main objective is to evaluate impact of environmental conflict on socio-economic developments in Kuresoi-Kenya.

1.4.2 Specific Objectives

This study will be guided by the following research objectives:

- i. To explore the root causes of environmental conflicts that undermine socio-economic development in Kuresoi sub-county Kenya
- ii. To determine the effects of environmental conflict on the socio-economic developments in Kuresoi sub county Kenya.
- iii. To examine the efficacy of mechanism to resolve environmental conflicts in Kuresoi sub- county Kenya.

1.5 Literature Review

In this particular section pertains literature from various scholars has been reviewed with regard to this study. The section has been arranged as per the study specific objective as

done by other scholars in the same area and draw gaps that were addressed by the current study.

1.5.1 Causes of Environmental Conflict in Kenya

Parvin and Shaw assert that when it comes to resource related conflicts the Horn of Africa is quite a good example.¹⁹ Lots of conflicts occur in the arid and the semi-arid areas.²⁰ In Kenya communities that live in arid and semi-arid areas are involved in lots of conflicts. These conflicts have led to massive killings in the country. Mostly these communities are usually armed and the government has always made steps to confiscate these ammunitions by asking them to surrender the fire arms. The home to the pastoralists, agro-pastoralists and national parks are the arid and semi-arid areas.²¹ ²²This shows that these people have to share the resources available and interacting with each other. Peaceful co-existence is therefore crucial for them.

Based on the research done by Sobania the unfulfilled demands of scarce water and pasture contribute to conflicts among the pastoralists.²³ According to Fratkin scarcity of land more often contribute to rise of violent conflicts and grievances in the society.²⁴ A larger

¹⁹ Parvin, G. and Shaw, R. (2011). Climate Disaster Resilience of Dhaka City Corporation: An Empirical Assessment at Zone Level. *Risk, Hazards & Crisis in Public Policy*, 2(2) 23-115.

²⁰ Mkutu, K.A. 2001. *Pastoralism and conflict in the Horn of Africa*.

²¹ Dida, B.T. 2008. *Pastoralism Under Stress: Resources, Institutions and Poverty among the Borana Oromo in the Southern Ethiopia*.

²² Mkutu, K.A. 2001. *Pastoralism and conflict in the Horn of Africa*.

²³ Sobania N. (2011). Feasts, Famine and Friends: Nineteenth Century Exchange and Ethnicity in the Eastern Lake Turkana Region. In: Galaty J.G. and Bonte P., *Herders, Warriors, and Traders: pastoralism in Africa*, Westview, Oxford, San Francisco, Boulder CO.

²⁴ Fratkin E. (2015). Resurgence of Inter-Pastoralist Warfare in Kenya. Paper presented to Panel *Resurgence of Ethnic Conflict and Tribalism in Africa*, American Anthropological Association Annual Meetings, Atlanta GA, Dec. 1, 2015.

percentage of people are involved in land conflicts worldwide. Mostly these conflicts will be among those seeking to take over land and the communities affected. Some of the variables that are mostly used to analyze conflicts where land plays the role include climate change environmental degradation etc.²⁵

According to Gudrum and Hjort land conflicts have contributed to lots destruction in the past across the borders.²⁶ For instance, the renowned Rwandan genocide. Land was the key player in the Rwandan genocide. The ordinary citizens who got vulnerable as a result of shrinking of the land sizes were instigated to kill their neighbors and take their land. Genocide was caused by deforestation and land degradation to a high extent.²⁷

A study by Mearns shows that water is life and no living organisms can survive without water. It is an essential aspect of life.²⁸ According to previously done research it has been predicted that by the year 2050 demand for will really escalate which will cause quite an intense competition for water.²⁹ Various states that share sources of water are at a high peril of experiencing disputes. Water competition will be worldwide and it will be a great threat to national security at local levels. Other than water, marine life is also a source of conflict for instance fish is known to be a source of conflict for a long time know.

²⁵ Urmilla Bob, Salomé Bronkhorst. 2002. "Environmental conflicts: Key issues and management implications."

²⁶ Gudrum, D., and Hjort, A. (2011). *Having Herds: Pastoral Growth and Household Economy*: Stockholm.

²⁷ Urmilla Bob, Salomé Bronkhorst. 2002. "Environmental conflicts: Key issues and management implications." 177-221.

²⁸ Mearns, R. (2014). The Changing Nature of Conflict and Famine Vulnerability: The Case of Livestock Raiding in Turkana, Kenya. *Disasters*, 22(3), 185-199.

²⁹ Gleditsch, N.P, K.Furlong, H.Herge, B.Lacina and T.Owen. 2006. "Conflicts over shared rivers: Resources scarcity or fuzzy boundaries." *Political Geography* 25: 361-382.

The situation is likely to worsen if the confines of the state are clearly defined and people are competing for these resources. In Cameroon, Niger, Chad and Nigeria environmental degradation and diminishing of water resources has brought about conflicts.³⁰ Farmers, pastoralists and fishermen have been involved in this dissonance. In agriculture water, has got a vital role. In Kenya Agriculture is the backbone of the economy and if water lacks then the country's economy is at stake. More so the food security of the country is affected.³¹

1.5.2 Impact of Environmental Conflict in Kenya

Omondi's study shows that Kenya has a long history of ethnic dissonance, due to the competition for power and scarce natural resources that dates to pre-independence times.³² The country has experienced election violence which was brought about by the competition of power among the political leaders. As a result, the country faced lots of destruction and high economic inflations. Lots of citizens were displaced from their homes leading to internally displaced persons in Kenya.³³ The country is comprised of 40 different ethnic groups. Competition for power and resources has been between four ethnic groups: 21% being Kikuyu, 14% Luhya, 13% Luo and 11% Kalenjin.³⁴ Competition for power has been rotating among these groups. They are able to come up with alliances within themselves

³⁰ Urmilla Bob, Salomé Bronkhorst. 2002. "Environmental conflicts: Key issues and management implications." 55-67.

³¹ 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): 35-62.

³² Omondi, L. (2015). Migration and Environmental Hazards. *Population and Environment*, 26:273-302.

³³ Leys, Colin. 2010. *Underdevelopment in Kenya*. London : Heinemann.

³⁴ Kagwanja, Peter Mwangi. 1996. "The environmental consequences of force migration in Kenya and Rwanda." *5th IRAP Conference on Forced Migration*.

and have control over natural resources and capital for development. It has been the goal of each ethnic group to have power to determine direction of flow of resources for development.³⁵

Kanesa asserts that in the most recent couple of years, around the Mara area, there has been massive expansion of scale farming and this has led to a great population growth rate in the area.³⁶This has resulted to less areas for cattle to graze, inhabitant for wild animals have reduced and places for wild animals to move around have also reduced. This has caused conflict between farmers, herders and the wild animals. This is also a case like that of the Nairobi National Park conflict between the part and the property market in Ngong, Kiserian and Rongai areas.

Kaptejns posits that the conflicts between human beings and wildlife today recently have achieved a stage where intercession by the government as far as detailing of fitting arrangements to manage the contentions and the fortifying of the lawful system.³⁷This by itself is insufficient as even where arrangement is set up, the contentions of the resources persevere. The Maasai people have existed together with the wildlife in the area of Mara. The wild animals and the herders had a comprehension of thought that there isn't resistance by any means.

³⁵ Kagwanja, Peter Mwangi. 1996. " The environmental consequences of forced migration in Kenya and Rwanda.." *5th IRAP Conference on Forced Migration* .

³⁶ Kanesa, L. (2014). Cattle as a Store of Wealth: Comment. *American Journal of Agricultural Economics* 62(3). p. 606-13.

³⁷ Kaptejns L. (2013). *Women and the Crisis of Communal Identity: the Cultural Construction of gender in Kenya History*, African Studies Centre Working Papers, Boston University, Boston.

According to Kimani, Kenya has experienced conflict in the past years over natural resources for instance; water, minerals, forests and land.³⁸ The policies by the Kenyan government to deal with environmental conflicts have not given the desired results to deal with environmental conflicts in general. There is still so much concern on environmental conflicts as they are still being experienced in Kenya.³⁹

Mwanje study shows that price inflation of basic goods by 360% has made the situation even worse.⁴⁰ In areas with conflicts the prices of goods are usually at a high price due to scarcity. This scarcity is attributed to security situation, lack of transportation due to blockades and so forth. During these conflicts, many people lose their jobs and to some people their businesses are destroyed thus increasing the levels of unemployment as well as poverty rates. The loss of property and assets by the internally displaced persons lead to the deepening of the poverty. Due to poverty people experience hunger, starvation, malnutrition and some even face death. However, some groups have benefited from these conflicts, especially those involved in weapons trade. They are financially motivated to continue supporting and sustaining armed conflict.⁴¹

³⁸ Kimani, A. (2015). *Environmental Degradation and High Fertility in Sub-Saharan Africa*. Morrison. 359-387.

³⁹ Patricia Kameri-Mbote, *Towards greater Access to Justice in Environmental Disputes in Kenya: Opportunities for Intervention*, IELRC Working 2005-1

⁴⁰ Mwanje, K. (2011). The Dependence of Drought Intensity on Climate. *Nature*, 326:483 485.

⁴¹ Collins H. Khal, *States Scarcity and Civil Strife in the Developing World*, Princeton University Press, Princeton (New Jersey), 2006.

Ochieng and Maina findings show that environmental conflicts are found to be crucial as they deal with the livelihood of people.⁴² Majority of the communities in Kenya and globally rely mostly on the natural resources to survive. The basic needs are food, water and shelter that greatly contribute to environmental conflicts. For example, conflicts between human beings and animals lead to animals spoiling the human crops which leads to poverty and lack of food to the humans. The most important things that human beings put first is whether they have water (clean) for consumption and for their animals and food for both themselves and their animals.

According to Hussein and Nelson (2015) it is of great importance to find solutions to deal with environmental conflicts as it will enhance the relationships of all those that use natural resources. Solutions to environmental conflicts also makes sure that all natural resources users have security and are assured of access to the resources and peace for survival. Various literature allude that conflicts causes pauperism and its persistence.⁴³

According to Karanja the well-off households are also vulnerable pauperism as a result of conflicts to as was the case in Rwanda.⁴⁴ People who belong to well-off households mostly own lots of property but in case of a conflict most of their wealth is destroyed leaving them

⁴² Ochieng B. & Maina, T. (2012), *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees*, in Harvard Environmental Law Review, Vol. 33, pp. 349 – 403.

⁴³ Migai Akech, "Land, the environment and the courts in Kenya," A background paper for The Environment and Land Law Reports, February 2006, 1 KLR (E&L) xiv-xxxiv.

⁴⁴ Karanja P. (2014). Cattle, Khat, and Guns: Trade, Conflict, and Security on northern Kenya's Highland-Lowland Interface. A Case Study, A paper prepared for the USAID Conference on *Conflict Resolution in the Great Horn of Africa*, June 2014, draft.

poor. Due to war changes that occur in the social environment affect people's response to poverty. Such changes include the changes in local governance structure.⁴⁵

A strong relationship exists between conflict and fragility which leads to high levels of poverty. Illegitimacy of the governing bodies contribute to extreme poverty. They lead to economic and social disenfranchisements which cause conflicts and instability. Armed conflicts escalate the levels of poverty by destroying asset, undermining livelihoods, and diversion of public resources from economically productive investments. Conflicts contribute to the negative impact on the annihilation of poverty.⁴⁶

Thus according to Mwema conflicts contribute to the negative impact on the annihilation of poverty.⁴⁷ From world banks report it takes almost a period of 14 years to recover economically for the countries that have experienced war.⁴⁸ Governing institutions should be really supported so as to overcome pauperism and discord. In order to help weak populations, get out of poverty lots of resilience have to be built by having policy that are effectively implemented. This will go miles in helping them in recovering from shocks and stresses.

⁴⁵ Mkutu, K.A. 2001. *Pastoralism and conflict in the Horn of Africa*.

⁴⁶ Rohwerder, Brigitte. 2014. "The impact of conflict on poverty."134-135

⁴⁷ Mwema, H. (2014). *Drought and Hunger in Africa; Denying Famine a Future*. Cambridge: Cambridge University Press. 23-29.

⁴⁸ Migai Akech, "Land, the environment and the courts in Kenya," A background paper for The Environment and Land Law Reports, February 2006, 1 KLR (E&L) xiv-xxxiv.

1.5.3 Institutions and Policy Framework to Control Environmental Conflicts in Kenya

Okwiri points out that whilst legislation relating to control of environmental conflict varies from country to country, common elements generally include: liability (being legally responsible for actions and activities) is a two-way street with both the employer and employees being liable for their actions; duties of employers and employees and penalties for non-compliance; the provision of a work environment that is safe and without risk to health; the provision of adequate facilities; maintenance of a safe means of access and egress; ensuring the absence of risks in connection with handling of plant and substances; development of procedures for emergencies within the facility or workplace; adequate training of staff and testing of plans and procedures; and provision of information in appropriate languages.⁴⁹

According to Daniel and Ashbindu the Kenyan government has set policies and frameworks aimed at controlling environmental conflict, as a minimum, Standard Operating Procedures (SOPs) for their facilities to address: evacuation; building fire; bomb, chemical, biological, radiological threat; suspected mail bomb/letter bomb; civil disorder/illegal occupancy; armed or dangerous intruder; hazardous material spill; gas leak or other noxious exposure; building collapse; medical emergency; and external emergencies – storm, flood, earthquake, tsunami and landslide.⁵⁰ Again, regional and local emergency services

⁴⁹ Okwiri, J. (2013). Environment, population growth and productivity in Kenya: A case study of the Machakos District. *Development Policy Review* 10:359-387.

⁵⁰ Daniel Schwartz & Ashbindu Singh, Environmental conditions, resources and conflicts: An introductory overview and data collection (UNEP, New York, 1999) 3-7.

personnel provide expert advice on the development of these procedures and this provides an important opportunity for an effective partnership with community agencies.⁵¹

There is a set planning committee which ensure the set polices are implemented as objected.⁵² While a tourism operator's committee will ideally involve representatives from every section of the organization, the planning committee for a destination should include representation from all key stakeholder as each will have a different perspective and different knowledge and skills to contribute. Counties are supposed to invite participation from relevant government departments and community agencies to reinforce the need for integrated crisis response and recovery processes for regional tourism. These committees are likely to form the core of subsequent crisis management teams.⁵³

The crisis response strategy includes actions taken leading up to and immediately after the impact of a crisis, to minimize its effects and to manage the consequences.⁵⁴ The tasks involved will depend upon the nature and the extent of the conflict, but if a destination is experiencing a crisis imposed by a disaster impacting upon the community, the responsibility for management tasks related to the protection of lives and property will rest

⁵¹ Swain, A. (2015). Environmental Migration and Conflict Dynamics: Focus on Developing Regions. *Third World Quarterly*, 17:959-973.

⁵² RANTCO, Research and Training Consultants (2016). *ALRMP Study on Land Tenure and Resource Management in Kenya. Legal Framework on Pastoral Land tenure and Legislation for the Arid Lands of Kenya*, Republic of Kenya, Office of the President, Department of Relief and Rehabilitation, Nairobi.

⁵³ Oxfam. (2016). Survival of the fittest pastoralism and climate change in East Africa. Oxfam Briefing Paper 116, Oxfam International 131-384.

⁵⁴ Kenya National Bureau of Statistics (2016). Kenya Household and Economic Survey Report, Government Printer, Nairobi, Kenya

with the conflict management agencies.⁵⁵ The Kenya counties are supposed to liaise with those agencies and be part of a coordinated, integrated response to the conflict.

Kenya Land Alliance report shows that the extent of stakeholder involvement in control environmental conflicts depends much on time, available resources and leadership of that particular society.⁵⁶ Kioko and Okello points three main stakeholders in crisis management for the tourism industry. These are: Government, Private sector and Non-profit organizations.⁵⁷

1.6 Gaps in Literature Review

The institutional and legitimate systems for settling environmental conflicts now set up in Kenya evidently have not eradicated environmental conflicts leaving a policy gap. From the reviewed studies none of the research has reviewed root causes of environmental conflicts, effects of environmental conflict and efficacy of mechanism to resolve environmental conflicts in a single study. Besides, the studies reviewed show that little has been done in Nakuru County and specifically in Kuresoi where the area has been indented as a hot spot of violence as a result of resource scarcity. This leaves an empirical gap. This study thus aimed to fill the identified gaps.

⁵⁵ Republic of Kenya (2010). *Nakuru County Development Plan 2010-2015: Effective Management for Sustainable Economic Growth and Poverty Reduction*. Nairobi: Government Printer, Kenya.

⁵⁶ Kenya Land Alliance, (2010), "National Land Policy in Kenya: Addressing Historical Injustices". Issues Paper No.

⁵⁷ Kioko J. & Okello M. (2015). Land use cover and Environmental changes in a Semi-arid range Land, Southern Kenya. *Journal of Geography and Regional Planning* Vol. 3(II), PP 322-326

1.7 Hypotheses of the Study

H₁: Environmental conflict significantly influence socio-economic developments in Kuresoi sub county Kenya.

H₂: Efficacy of mechanism to resolve environmental conflicts significantly influence socio-economic developments in Kuresoi sub- county Kenya.

1.8 Justification of the Study

The significance of this study would benefit the three group's namely, the government, future scholars and the general public.

This study would be of significance in that it would enable the government through the relevant arms and agencies to obtain information concerning the menace of environmental conflicts in Kuresoi area and Kenya at large. The government would be able to have an indication of the level of impact that the environmental conflicts have subjected its citizens to. This would help them formulate policies and mechanisms that assist in addressing this issue.

This area of research has not been sufficiently studied. Therefore, there exist a gap in available literature. This study would help in providing information that would enable further understanding of the impact of environmental conflicts on socio-economic growth and efficiency of prevention measures and mechanisms already in place. It would also contribute to added knowledge and fill the gap on the level of environmental conflicts. It would also act as a basis of reference materials to academics.

No doubt the general public will find useful information that would help them in adopting

the appropriate channels in solving environmental conflicts at the community level to minimize sufferings that these victims and their families are facing as a result. The government interventions proposed in the study would salvage them from the severe effects of environmental conflicts such as drought and famines, wildlife attacks and they would be able to access information on how to coexist peacefully in the current world bearing the environmental concerns that affect them.

1.9 Theoretical Framework

In order to evaluate the impact of environmental conflicts in Kuresoi, this study employs two theories Frustration-aggression and Environmental scarcity theories. Frustration is a feeling of irritation and annoyance due to lack of achieving something you really wanted. On the other hand, aggression is a malicious feeling towards something or someone and is often as a result of frustration.⁵⁸

1.9.1 Frustration-Aggression Theory

This study uses Frustration-aggression theory which suggests that aggression is always a result of frustration. It is a theory that was put forward by Dollard, Doob, Miller, Mower and Sears in their book Frustration and Aggression Hypothesis in 1939. Theory provides the reason for acting aggressive. 'Being frustrated made me do it' this reason however can be taken as an excuse for hostile actions. According to the hypothesis it is evident that where there is frustration, conflict and violence is also present.⁵⁹

⁵⁸ Torras, M. and Boyce, J. K., (2013). Income, inequality, and pollution: A Reassessment of the Environmental Kuznets Curve. *Ecological Economics* (25): 147-160.

⁵⁹ Dennen, J.M.G.van der. 2005. "Theories of Aggression." *Default journal* 1-3.

Conflict takes place when at least two groups or people see that their advantages are different, express unfriendly dispositions, or take after their interests through activities that harm other groups. At the end of the day, conflict results from disagreements between two related parties with same interests but view their goals differently. These groups might be people, little or vast of individual, organizations and even states to states who acts out of aggression to achieve something.

As to the principal hypothesis, it is indicated "that the event of forceful conduct dependably surmises the presence of dissatisfaction and, contrariwise, that the presence of disappointment dependably results to some type of hostility".⁶⁰ Theory provides the reason for acting aggressive. 'Being frustrated made me do it' this reason however can be taken as an excuse for hostile actions. According to the hypothesis it is evident that the presence of disappointment dependably prompts to hostility.⁶¹

The revised Frustration-Aggression hypothesis maintains that: Frustration stirs up behavior that could be hostile or aggressive. Any aggressive behavior is as a result of frustration. Hence Frustration is a necessary condition for hostility.⁶² A more comprehensive theory on aggression was brought forth and Dollard specified that aggression was dependent on the value, response and degree.

⁶⁰ J. Dollard, L. W. Doob, N. E. Miller, O. H. Mowrer, and R. R. Sears. 1939. *Frustration and Aggression*. New Haven.

⁶¹ Kariuki Muigua, Paul Musyimi; Enhancing Environmental Democracy, Law Society of Kenya Journal Vol 4 2008 No.1.

⁶² Dennen, J.M.G.van der. 2005. "Theories of Aggression." *Default journal* 1-3.

A significant element of frustration-aggression theory concerns the redirection to frustration by a community or individuals due to lack of a resource and thus feels as if others are advantaged or are part of him or them lacking.⁶³ This frustration translates to negative energy through destruction of others property, fighting or even murder. This theory thus underpins the study well as the same scenario has been experienced in Kuresoi over the years.

1.9.2 Environmental Scarcity and Violent Conflict Theory

This study is based on environmental scarcity theory that was developed by Thomas Homer Dixon. According to Homer Dixon environmental scarcity, economic, political and social factors bring about migrations, poverty, and violence.⁶⁴ Homer came up with a model that deploys a conceptual framework. It presents the obtaining of social reality in a way that the causal process linking environmental scarcity and violence fall in three stages. These are the origin of environmental scarcity, its socioeconomic and political consequences and the outbreak of different forms of violent conflicts.

Environmental scarcity arise as a result of resource depletion, demographic pressure and distribution inequalities.⁶⁵ As a result, socio-economic effects of the scarcity. Thomas points out a relationship between degradation of the environment, struggle over resources

⁶³ J. Dollard, L. W. Doob, N. E. Miller, O. H. Mowrer, and R. R. Sears. 1939. *Frustration and Aggression*. New Haven.

⁶⁴ Homer-Dixon, Thomas. 1999. "Environment, Scarcity, and Violence." „Environment, Scarcity, and Violence: Evidence from Case Studies“ *International Security* 19 (1): 5-40.

³⁵ Homer-Dixon, Thomas. 1999. "Environment, Scarcity, and Violence." „Environment, Scarcity, and Violence: Evidence from Case Studies“ *International Security* 19 (1): 5-20.

and discord. Degradation and conflict have a direct relationship. He specifies that resource depletion may be supply-induced, demand induced or as a result of structural scarcity.

Decrease in the availability of resources for consumption lead to supply-induced scarcity. Increase in the total population and change in consumption rates bring about demand induced scarcity. Structural scarcity is brought out by unfair distribution of wealth and power. All these factors interact and none operates alone in causing conflicts. 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.⁶⁶ The factors interact leading to two phenomena which are capturing of resources and marginalization of the environment. When the reduction of quality or quantity of natural and renewable resources coincides with the population growth, that's when resource capture occur.⁶⁷ Ecological marginalization is when population growth, unlimited pasture and water cause migrations in regions that are ecologically fragile.

Thus the theory can be linked to this study as it portrays scarcity of environmental beneficiary resulting to violence or conflict between individuals or a community. According to the theory environment should be protected and interest that come from individuals avoided in order to conserve for the benefit of all the stakeholders.

⁶⁶ Homer-Dixon, Thomas. 1999. "Environment, Scarcity, and Violence." „Environment, Scarcity, and Violence: Evidence from Case Studies“ International Security 19 (1): 35-40.

⁶⁷ Gitari, Beatrice Njeri. 2015. "Environmental conflict and national security in Kenya: Case study of Turkana community." University of Nairobi , Nairobi.

1.10 Research Methodology

This section discusses the method that was employed in carrying out the study. It includes the area of study, research design, population of the study, sampling, data collection, data analysis and data reliability and validity.

Area of Study

This study focuses on the southern part of Kuresoi on the former Rift Valley province. Kuresoi has a population of 37,681 and an area of 1,297.7 km². Kuresoi County is the home of Kalenjin, Ogiek, Kikuyu and Kisii communities.⁶⁸ Kuresoi is a home of the Mau Escarpment and Forest, it is one of the largest the water catchment area which most rivers originate. It borders Narok to the South and Kericho to the West.

Research Design

According to Cooper a research design is a plan that the researcher adopts so as to answer questions accurately, according to the objectives, reliably and economically.⁶⁹ The design helps the researcher know the right procedures to follow so as to attain efficient results that are valid and accurate according to the objectives of the study.

This study adopted a survey design. This is the process of collecting data so as to test for hypothesis or to give answers according to the current subjects in the study according to

⁶⁸ Kenya National Bureau of Statistics (2016). Kenya Household and Economic Survey Report, Government Printer, Nairobi, Kenya.

⁶⁹ Cooper, W. (2009). Qualitative Evaluation and Research Methods. London: Sage

Mugenda Mugenda.⁷⁰ So as to attain the best understanding of results, both quantitative and qualitative design were used.

Population

According to Nyororo said that a population is a well-defined set of persons, elements, events or households under investigation or study to ensure the homogeneity of the population of interest.⁷¹ For this study the population consists of all the people living in Kuresoi Region in Kenya. The residents were supposed to have stayed for more than five years in order to participate in the study. This helped to get the relevant information as they herd the background of the area.

Sample and Sampling Procedure

According to Kothari, a complete list of units or items with the same interest from where the sample is obtained is what is termed as a sampling frame.⁷² The requirements that tend to fulfil an optimum population are efficiency, representativeness and reliability. Data duplicity results from an unnecessary large sample size, consumption of more time and cost implications while a small sample size would not make a good representation of the targeted population. Kothari indicates that a 10-20% sample size of the targeted population is adequate.

⁷⁰ Mugenda , O. M., & Mugenda, A. G. (2003). *Research Methods: Quantitative & Qualitative Approaches*. Nairobi: Acts Press.

⁷¹ Nyororo, C. (2006). Carryover and backfire effects in marketing research. *Journal of Marketing Research*, 30, 52–62.

⁷² Kothari, C. (2004). Pretesting in questionnaire design: The impact of respondent characteristics on error detection. *Journal of the Market Research Society*, 36(October), 295–314.

Data Collection method /Instruments

This study used both primary and secondary data, which was collected by way of an interview guide that was structured as per the research questions. This was done on the victims and their family members who had experienced environmental conflict in Kuresoi Sub County Kenya. Secondary data was acquired from previous studies on the impact of environmental conflicts and KNBS where necessary.

Reliability

The reliability of the research instrument was tested by use of 5 individuals as a pilot group from the targeted population. This piloted data was not be used in the analysis of the actual data. Pre-test of the research instrument was allowed by the pilot study. So as to enhance the validity and reliability of the instrument, establishment of instrument items of the respondents was clarified. To identify items and requirement of modification, the pilot study helped to familiarize respondents with research and management procedures. In case of inconsistencies that might arise from the instruments, the results helped to correct them as they later ensure what was measured is what was intended.

Data Analysis and Presentation

Content analysis was used by grouping the responses given in similar themes which was analysed per indicator and supporting or opposing literature backed the findings.

Ethical Consideration

According to Denscombe what generally governs a person are his or her moral principles which are generally referred to as ethics.⁷³ Another description is a right or wrong of the morals of an individual. This study focused on the ethical considerations of stakeholders. The respondents of the study, researchers and the society are the stakeholders in this study. On the basis of the society, loyalty, duty and obedience was emphasized. On the respondents, confidentiality and privacy was ensured. Finally the researcher avoided plagiarism, practice integrity, honesty and objectivity.

Limitations

The study was only limited to counties in the Kuresoi Sub-county of Nakuru County. Respondents may held information as they may assume the research is an investigation on going for refreshing of the ICC cases thus withholding information. To counter this the research informed them that the research was purely for academic purposes. The terrain of Kuresoi is hilly and slippery when it rains to this end the research ensured he conducts the research during favorable weather in order to reach all the participants.

1.11 Chapter Outline

Chapter one introduces the topic of our research study, by putting across the broad perspective upon which our study is founded upon, it outlines the statement of the research problem, broad and specific objectives of the study, literature review, hypothesis,

⁷³ Denscombe, J. (1998). *The Postgraduate Research Handbook*. New York: Palgrave

significance of the study, theoretical and conceptual framework of our study as well as the research methodology and lastly, it briefs on the scope and the limitations of the study.

Chapter Two provides the background of root causes of environmental conflicts that undermine socio-economic development from a global, regional level and in Kenya.

Chapter Three looks at the effects of environmental conflict on the socio-economic developments. The chapter utilizes the collected data to develop answers to the proposed research questions. Here also the environmental conflicts will be identified and discussed as per the reviewed literature.

Chapter Four presents content analysis of the attributes of the study while seeking to determine significant efficacy of mechanism to resolve environmental conflicts in Kuresoi sub- county Kenya. Other emerging issues not addressed in the study but have a close link with the objectives will be presented.

Chapter Five provides conclusions to the findings of the study, giving the implications of environmental conflicts on the socio-economic developments in Kuresoi Kenya and make recommendations on the way forward and suggestions on areas for further studies.

CAUSES OF ENVIRONMENTAL CONFLICTS IN KURESOI KENYA

2.1 Introduction

The chapter addressed the causes of environmental conflict in Kenya. Special focus is on the Development of economic conflict, economic conflict in Kenya and narrows down to the case area which is Kuresoi Sub-county as presented below:-

2.2 Development of Economic Conflict

2.2.1 Social Factor

Globally, changes in the environment have effects on climate change, sea level, marine creatures, wetness of the soil and accessibility of water; these then lead to agricultural, forestry, natural eco-system changes, excessive heat, increase in vector-borne diseases, world's population growth rate, issues on settlement and relocation issues.⁷⁴ All these have massive financial effects to both the economy and the environment. Victims of conflicts in the area have been subjected to psychological and emotional trauma. Socially, conflicts have resulted to increase in social distance between ethnic groups.⁷⁵

Conflicts in Africa affect the wellbeing of a place thus impacting negatively on their livelihood, access to food and access to health care.⁷⁶ The most obvious outcome of conflicts has been deaths directly resulting from injuries sustained during attacks. In Kuresoi South and North where the research was done, 14 out of the 78 respondents had

⁷⁴ World Bank, (2016). *Reshaping the future*. Oxford University Press: Washington DC.

⁷⁵ UNDP. (2015). *National Policy on Peace Building and Conflict Management*. Government of Kenya. Office of the President: Nairobi.

⁷⁶ Human Rights Watch (2013). *Divide and Rule: State Sponsored Ethnic Violence in Kenya*. London.

lost a nuclear family member in the conflict, especially in 1992 and 2008. 75% of the respondents had witnessed the killing of people they knew; close relatives, friends and neighbors.⁷⁷ To some the scenes were very vivid and the impact of the experiences could be heard from the tone they used.

Education has also been jeopardized by conflict.⁷⁸ The dropping out of school among many children has been another consequence of ethnic violence. This is closely linked to dropping out of school is the challenge of early and late marriages. Girls who dropped out of school ended up marrying off early. There are several reasons advanced by respondents as to why girls married early.⁷⁹ Violence scattered family members, some stayed for months before reunion. In instances where parents were momentarily separated from their children, their daughters became exposed to sex and adult lifestyles quite early. Those who were internally displaced were relocated to tents where it became practically impossible for parents to share the same tent with their daughters, many of whom were adolescents. The exposure and the lure of a better life by men in urban areas where most of the refugee camps were located, ensnared many girls to early marriages.

According to the respondents, in every home that experienced the 1992- 2008 conflict there were cases of children who stopped schooling.⁸⁰ From 1992, many families were evicted from their homes and consequently, many pupils could no longer access their schools. They sought refuge at Elburgon and Molo towns as Internally Displaced Persons (IDPs). In such

⁷⁷ Chemwa Arap Kapror Njoro 08/09/2017

⁷⁸ Kenya Land Alliance. (2014). *Land Data Survey Report on Internal Displacement*, Nairobi: Oxford Committee for Famine Relief.

⁷⁹ Kamau Mwangi Turi 17/08/2017

⁸⁰ World Bank, (2015). *Breaking conflict trap. World policy*. W. World Bank. Oxford University Press: Washington, DC.

circumstances, and at a time when Free Primary Education (FPE) had not been introduced by the government, it was hard for pupils to transfer to new schools. Many school going children also dropped from school because some schools such as Mutate at Kapsita, Jogoo and Mau Summit were burned or looted in the course of the violence.⁸¹

2.2.2 Political Factor

The final major model of environmental degradation is the use of political economy to explain the development and continued persistence of environmental problem.⁸² This perspective maintains that the capitalist economy forms a “treadmill of production” that continues to create ecological problems through a self-reinforcing mechanism of ever more production and consumption. The logic of the treadmill of production is an ever-growing need for capital investment to generate goods for sale in the marketplace. Corporations seek to maximize the return on capital investment. The expansion of the economy drives two fundamental dynamics of a market economy: first, the creation of economic wealth, and second, the creation of the negative byproducts of the production process. Thus the treadmill operates to maintain a positive rate of return on investments and externalizes the environmental costs of its activities.⁸³

⁸¹ Waki, P. (2008). *Report of the Commission of Inquiry into Post Election Violence*. Nairobi, Government Printer.

⁸² World Bank, (2015). *Breaking conflict trap. World policy*. W. World Bank. Oxford University Press: Washington, DC.

⁸³ UNDP. (2015). *National Policy on Peace Building and Conflict Management*. Government of Kenya. Office of the President: Nairobi.

A second key to understanding the range of environmental politics is through the analysis of the different underlying models of the interactions between society and the natural environment.⁸⁴ These approaches cross discursive communities, and thus define a second dimension in environmental politics. The nature of the specific models of the driving forces has an important impact on the nature of environmental policy. From a Foucaultian perspective, environmental science and politics are coproduced and reinforcing processes.⁸⁵ This means that politics is not strictly limited to responding to neutral scientific finding.

Political forces also work to shape the nature of and dissemination of environmental frameworks that reflect certain political or economic interests, resulting in implicit social and political models being built into statements of supposedly neutral explanations.⁸⁶ These frameworks then are used to guide the development of environmental policy along certain lines. These analyses then form the institutional basis of truth claims which are presented as non-negotiable forms of truth to legitimate certain political objectives. Thus it is important to see the connections between different models of environmental degradation, and how they define a certain political approach.⁸⁷

There is some evidence that democratic societies like in Africa demonstrate more enlightened environmental policies than societies organized under other political

⁸⁴ Lane, C. (2014). *Pastures Lost. Barabaig Economy, Resource Tenure, and the Alienation of their Land in Tanzania*. Initiatives Publishers. Nairobi.

⁸⁵ Amisi B. (2016). *Conflict in the Rift Valley and Western Kenya*. Seminar Paper presented to the USAID Conference on Conflict Resolution in the Great Horn of Africa.

⁸⁶ Shafik, N. (2015). *Economic development and environmental quality: an econometric analysis*'Oxford Economic Papers46757773

⁸⁷ Todaro, M. (2014). *Economic development*. London Longman's publisher.

structures. In addition, governments in democratic societies rarely, if ever, face serious violent challenges for any reason.⁸⁸ It could thus be expected that environmental and resource topics would not trigger this either. These links do not only refer to democratic structures but to strong and independent governmental institutions and well-established and enforceable property rights in general.⁸⁹ Nevertheless, low income levels combined with a quasi) democracy are often related to violent conflict.

There are counties experiencing conflict influencing the socio-economic development of their dwellers this has been experienced in countries such as Angola or Rwanda, and that armed conflict occurring in Nigeria is caused by religious conflicts between Muslims and Christians.⁹⁰ Even in the case of conflict in South Africa Just before the 1994 elections, the factors were said to be political between parties of African National Congress (ANC) and Inkatha Freedom Party (IFP). Scharf argue that, conflicts in Africa are not ethnic but rather politically instigated.⁹¹ According to the interviewee the same case applies to Kuresoi where the violence experienced has been catalysed by the political class deviding the community ethically to achieve their political ambitions.⁹² This has really affected development in the area with the highest impact on Kiptororo, Nyota and Sirikwa area.

⁸⁸ Lindmark, M. (2015). An EKC-Pattern in Historical Perspective: Carbon Dioxide Emissions, Technology, Fuel Prices and Growth in Sweden, 1870-1997. *Ecological Economics Journal*, 42(3): 33-47.

⁸⁹ Ahmed, A. (2011). Urbanisation and the Challenges of development. *Journal of sustainable development in Africa* 13, (7) 210 -235

⁹⁰ Opschoor, K. (2014). Economic Growth and Emissions: Reconsidering the Empirical Basis of Environmental Kuznets Curves, *Ecological Economics* 25: 161-175.

⁹¹ Scharf, R. (2014). *Strategic Conflict Analysis and Conflict Impact Assessment*: Discussion Paper. London, Department for International Development.

⁹² Kipsige Tiony Segut 03/08/2017

2.2.3 Economic Factors

Kenya experienced rapid economic growth of about 5.6% of GDP (Gross Domestic Product) in 2010 after suppressed growth of 1.5% and 2.6% in 2008 and 2009.⁹³ Over this period, most sectors in the economy experienced increased productivity and growth in job opportunities. The agricultural sector reported a 6.3% real growth rate that was an increase from 4.1% in 2008 and 2.6% in 2009. The manufacturing sector on the other hand grew by 4.4% an increase of 2.6% from 2009.⁹⁴ The agricultural and forestry sectors continued to be the key contributors to GDP with their contributions being unparalleled by other sectors. In 2010 the two sectors contributed 21.5% of the GDP a decline from 24.4% contribution in 2009.⁹⁵ While the manufacturing and wholesale and retail trade sectors remained the second highest contributors to the GDP. According to the reviewed secondary source, the wholesale and retail trade sector contributed 10.3% and 9.8% of the GDP in 2010 and 2009 respectively while the manufacturing sector contributed 10% and 9.9% of the GDP in 2010 and 2009 respectively.⁹⁶

Over the same period however, environmental degradation became more severe.⁹⁷ Wetlands and wildlife numbers also declined while other renewable and non-renewable

⁹³ Eriksson, C. & Persson, J. (2012). Economic Growth, Inequality, Democratization, and the Environment, FIEF Working Paper Series, No 178

⁹⁴ Hettige, H., Mani, M. & Wheeler, D. (2015). Industrial Pollution in Economic Development. *Policy Research Working*, Paper 23, The World Bank. Geneva.

⁹⁵ Ahmed, A. (2011). Urbanisation and the Challenges of development. *Journal of sustainable development in Africa* 13, (7) 210 -235

⁹⁶ Opschoor, K. (2014). Economic Growth and Emissions: Reconsidering the Empirical Basis of Environmental Kuznets Curves, *Ecological Economics* 25: 161-175.

⁹⁷ FAO (2010), 'Global Forest Resources Assessment 2010, Forestry Papers, 140, Food and Agriculture Organization of the United Nations, Rome

resources became increasingly exploited and therefore depleted. According to the responses received environmental degradation of this magnitude leads to economic and social costs, both now and in the future.⁹⁸ These costs include direct ones in terms of production and consumption opportunities foregone, direct costs in terms of abatement and replacement expenditure, indirect costs to other production and consumption activities and costs in terms of future opportunities foregone. Social costs include stress on the community social structures, increased possibility of competition and conflict on resources amongst other costs.⁹⁹

Findings from the interviewee shows that there is a kind of an inverted U-shape relationship between environmental conflict and socio-economic development in Kuresoi.¹⁰⁰ The environmental improvement observed does not necessarily derive from economic growth reaching a certain level of development. The area according to the interviewee has a tendency to importing contamination escalated exercises, such as assembling of clothing and furniture, to Kuresoi, which is liberally blessed with plenty natural resources. Hence, the consequence of this procedure is diminish in environmental degradation and addition in contamination pointers. In universal scale, contamination does not worsen by any means, rather it is just exchanged from one to others. There are equal defects in econometric model used to appraise connection amongst economy and environmental conflict.¹⁰¹

⁹⁸ Kimani Kabuu Sagaitim 01/08/2017

⁹⁹ Lane, C. (2014). Pastures Lost. Barabaig Economy, Resource Tenure, and the Alienation of their Land in Tanzania. Initiatives Publishers. Nairobi

¹⁰⁰ Alice Nyang'gai Mau Summit 04/09/2017

¹⁰¹ Fogel, R. (2014). The Escape from Hunger and Premature Death, 1700-2100: Europe, America, and the Third World. 4th ed. Cambridge: Cambridge University Press

From the foregoing, it is evident that environmental problems constitute an important challenge and focus should gradually shift from politics and poverty to environmental issues.¹⁰² The quality and richness of terrestrial, freshwater, and marine environments have been grossly interfered with due to pollution and this has subsequently led to a decline in the establishment of industrial and manufacturing sectors. Fast growth rate, development, consumption of energy, overgrazing of animals in lands and over cultivation of lands by farmers has led to several environmental issues.¹⁰³ Major problems have been caused to growth, stability and even to the attainment of national goals due to socio-economic effects of environmental decline. The future challenge is to go on attaining growth of the economy, establish employment and generate solid income and altogether ensuring that natural resources are well conserved.¹⁰⁴

2.2.4 Interethnic Factors

Globally, regions have been occupied by certain ethnic background dweller.¹⁰⁵ These has created frameworks created by colonial governments to enhance inseparability and cohesion between communities. However, these frameworks have been broadly dissolved, as a result of provincial and post-colonial lawful meanings of land proprietorship and resource use. The expanding accentuation on individual as opposed to collective property

¹⁰² Hettige, H., Mani, M. & Wheeler, D. (2015). Industrial Pollution in Economic Development. *Policy Research Working, Paper 23*, The World Bank. Geneva.

¹⁰³ Grossman, G. & Krueger, T. (2014). *Environmental Impacts of a North American Free Trade Agreement*, in P. M. Garber, (ed.). *The U.S.-Mexico Free Trade Agreement*, Cambridge, MA: MIT Press, pp. 13-56.

¹⁰⁴ Udah, E. & Obguagu, R. (2012). Constraints to Economic Development and Growth in Nigeria. *European Journal of Scientific Research 65 (4) 581 – 593*.

¹⁰⁵ Shafik, N. (2014). *Economic Development and Environmental Quality: an Econometric Analysis*, Oxford Economic Papers 46: 757-773.

rights has prompted to growing confinements on population development and rights, the establishments of peaceful economy, which has thusly undermined noteworthy adapting systems and expanded the defenselessness of peaceful groups.¹⁰⁶ Thus, people never again hold the abilities, exercises and resources required to secure an insignificant methods for living. Although these elements, the nearness of these outskirts localities to more extensive local conflict: Sudan, Ethiopia, Somalia has made access to little arms moderately simple. In a setting of expanding weakness at the family unit level both from instability and monetary decay, little arms are viewed as family or group resources.¹⁰⁷

According to Usenobon and Chuku, security is a very crucial issue in a country and it needs to put security interest first before other issues.¹⁰⁸ Security is the crucial duty of the state. The 2010 Kenya Constitution of the particularly expresses that "The security and welfare of the general population should be the main role of government". Sadly, government on this established duty has neglected to give a secured and safe environment for lives, properties and the direct of business and economic exercises. The disturbing level of uncertainty has fuelled negative ethnicity rate in various communities, leaving unpalatable outcomes for the economy and its development.¹⁰⁹ Inter-ethnic conflicts have caused such

¹⁰⁶ UNDP (2016). *Report on the Status of Drought Preparedness and Mitigation in Sub-Saharan Africa. United Nations (Volume 1)*. New York: Office of Combat Desertification and Drought, United Nations Development Programme (UNDP).

¹⁰⁷ UNSO (2016). *Drought Preparedness and Mitigation in Sub-Saharan Africa*. New York: United Nations Office to Combat Desertification and Drought.

¹⁰⁸ Usenobon, A. & Chuku, K. (2011). *Economic Growth and Environmental Degradation in Nigeria: Beyond the Environmental Kuznets Curve*, University of Uyo, Nigeria

¹⁰⁹ Adediran, O. (2011). Human Development & assessment of millennium Development goals (1990 – 2010). *Ovidus University Annals; Economics Science series. XI (I) 34 -45*.

havoc as loss of human life, poor inter-ethnic relations, forced human displacements, destruction of property, cattle rustling, slowed economic growth and increased cases of SGBV.¹¹⁰

Kuresoi is faced with Interethnic factor which is overwhelming increasing the challenges which posture genuine danger to the economy of the area. Since 1997 the Kuresoi has experienced ethnic conflicts mostly between the Kalenjin and the kikuyu communities.¹¹¹

The conflict has resulted to increased poverty, high rate of unemployment, incapacitating youth unemployment, low modern yield, precarious and crumbling swapping scale, high rates of inflation, deficient physical and social foundation, substantial local obligation, and rising supply of external obligation.¹¹²

According to one of the interviewees the main factor affecting Kuresoi, is that most of the people and the society at large compete to increase their share of resources that eventually results to conflict as some end up not having an equal share due to the imbalances in the society.¹¹³ Some of the respondents found that the greater part of the contentions emerged when standard practices are never seen as authentic or predictable with national approaches, or when substances outside to a group can seek after their interests, while disregarding the necessities and prerequisites of the 'insiders'.¹¹⁴ Conflicts, rise up out of

¹¹⁰ Inyang, F. & Eleje, J. (2012). Poverty, Environmental Degradation and Sustainable Development: A discourse". *Global Journal of Human social science, sociology, economics and Political science*.

¹¹¹ Okada, K. & Samreth, S. (2014). *Empirical Study on Environmental Kuznets Curve for CO2 in France: the Role of Nuclear Energy*. *Energy Policy*, 38, 4057-4063.

¹¹² United Nation conference, (2015). Declaration of the UN Conference on the human environment.

¹¹³ Chebet Mender Segut 02/09/2017

¹¹⁴ Republic of Kenya (2016). *Development Policy for the Arid and Semi-Arid Lands (Asal)*. Nairobi: Government Printer, Kenya

disparities in getting to or controlling resources.¹¹⁵ Without solid neighborhood organizations, when peaceful groups battle to augment their offer of the constrained touching resources, particularly amid dry seasons, rivalry and struggle emerge.¹¹⁶ By activating shortage and hardship, communities try to fetch what they lack from other communities which cause strife as well as trade off occupations influencing the socio-economic activities of the area.¹¹⁷

Shortage of resources, in this manner, drive society into a self-strengthening winding of viciousness, institutional brokenness, and social fracture. A few examinations (Njeri, Kamande, Amisi) concentrating on dry spell and fierce conflicts have been directed in the Kenya in different ranges and have indicated comparative outcomes.^{118 119 120} Also, run degradation has roundabout potential impacts of inciting ethnic strains over shared resources without solid neighborhood establishments and between group resource sharing courses of action.¹²¹

¹¹⁵ Swain, A. (2015). Environmental Migration and Conflict Dynamics: Focus on Developing Regions. *Third World Quarterly*, 17:959-973.

¹¹⁶ Krueger, H. (2015). Economic Growth and the Environment, *Quarterly Journal of Economics* 110(2): 353-377.

¹¹⁷ Federal environmental Agency Act (2012) Cap. F. 10. *Laws of the federation of Nigeria*. International Union for the Conservation of Nature (IUCN), 1980. *World conservation strategy Living resource conservation for sustainable development*.

¹¹⁸ Njeri, M. (2016). Coping with Riverbank Erosion Hazard and Displacement in Bangladesh: Survival Strategies and Adjustments. *Disasters*, 13:300-314. Page | 75

¹¹⁹ Kamande, W. (2014). Environmental Conservation as an Engine for Economic Growth: *Testing the Validity of Environmental Kuznets Curve on Carbon Emissions for Kenya*. Unpublished MA Thesis, University of Dares Salaam.

¹²⁰ Amisi B. (2016). Conflict in the Rift Valley and Western Kenya. Seminar Paper presented to the USAID Conference on Conflict Resolution in the Great Horn of Africa.

¹²¹ Ogboru, I. (2016). Readings in economic development and planning. University of Ilorin press.

According to one of the administrator in Kuresoi, the area has in the course of the last three or four decades, been the field for an assortment of low force 'conflicts, some of which are connected to more extensive cross-fringe and local conflicts.¹²² The foundations of these conflicts lies in a blend of political, financial and biological components. These include: A long history of financial and social underestimation from focal specialist; expanded rivalry over resources; decreased access to land, water and other natural resources because of growing statistic and environmental weight, and diminished access to credit, markets and expansion services.¹²³

2.3 Economic Conflict in Kenya

2.3.1 Land Issues

The desire to own land for use has been a contentious issues in Kenya since the colonial government and continues to be a challenge to every government thereafter. The scarcity of land has resulted to conflicts within communities and individuals. Inconsistent stream of waterways combined with the issues of disintegration is viably undermining the capability of water system ventures, as is so obvious in the East Mau program. A few extensive dams were built for the era of energy, and also for water system and surge control downstream. .¹²⁴ Nevertheless, the tree cover diminishment in the significant watershed regions has risked the enduring supply of water to the stores, on which the accomplishment

¹²² Gakinya Nyagitheri Nyakinyua 11/08/2017

¹²³ Okwiri, J. (2013). Environment, population growth and productivity in Kenya: A case study of the Machakos District. *Development Policy Review* 10:359-387.

¹²⁴ Shafik, N. (2015). *Economic development and environmental quality: an econometric analysis* 'Oxford Economic Papers46757773

of the venture is needy. Undertakings are additionally undermined by siltation, a procedure that not just causes stream bowls to sediment up (lessening stockpiling limit), additionally stifles hydropower dams and defiantly influences agriculture in the area thus negatively impacting on social economic activities of the area.

Forested regions are particularly touchy to population weight and business misuse. In Kuresoi, felling of trees automatically leads to the loss of profitably in that specific area, as the soil is usually poor. Lack of vegetation lead to the loss of supplements in soil, so once the vegetation is lost the soil supplements are automatically lost when washed away.¹²⁵ Therefore when both air and soil are dry, they lead to the lack of quality and effectiveness of land. This sheds light to the fact that forests have reduced their capability to produce fuel, food and shelter thus, the issue is whether the land will be able to recover its capability. The issue of degradation is greatly expanded by soil disintegration factor.

According to the respondents, in Kuresoi, every year about a quarter tone of topsoil is washed way from the deforested mountain, this is approximately 11,000 sections of soil lost each year through disintegration, desertification and toxification which the resource administration is in support with.¹²⁶ Disintegration is mostly caused by the movement of people. Most of the steep slopes do not have terraces, inadequate water systems and overgrazing of animals in the lands.¹²⁷

¹²⁵ Vincent, J. (2015). Testing for Environmental Kuznets Curves within a Developing Country. *Environmental and Development Economics* (2):417-431

¹²⁶ Kwamboka Moikoyo Mukorombothi 01/08/2017

¹²⁷ Kenya National Bureau of Statistics (2016). Kenya Household and Economic Survey Report, Government Printer, Nairobi, Kenya.

Respondents indicated that the financial effect coming about because of a decrease in profitable limit because of biological associations does not stay confined, particularly when forest cover is lost in a watershed.¹²⁸ The soil's water maintenance limit is lost and the arrival of precipitation ends up noticeably sporadic; times of surges took after by dry spells turn into the standard.¹²⁹ Agriculturists in the valley lands are especially defenseless as streams, for example, Mara River, Sondu Miriu and Molo River never again supply customary measures of water system. Flooding in the Molo gives a realistic case of the related expenses of deforestation. As the foothill forests are cleared for agricultural, the general population in the valleys turn out to be more helpless against flooding. In the 1997-1998 El Niño floods, Kuresoi alone suffered losses of 25 lives who drowned.

One of the respondents also indicated that deforestation has led to a lot of damage to the soil and water which has resulted to contamination and diseases.¹³⁰ Cutting down of trees leads to floods that requires various measure to deal with that include diverting, use of dams and diking. These measure though have some effects though such as soil dampness. They have additionally harmed the vegetation and untamed life on the floodplain, and also riverine fisheries.^{131 132}

¹²⁸ Josphat Wanyama Molo Town 20/08/2017 & Kimeli Tesot Tinga Juu 13/08/2017

¹²⁹ Ellis J. (2015). Vulnerability and Complex Ecosystem Dynamics Implications for Development in Living with Uncertainty: New Directions in Pastoral Development in Africa. I, Scoones (ed) *International Institute for Environment and Development*. London.

¹³⁰ Faustin Lanyasunya Elburgon 10/08/2017

¹³¹ Nori. M., Crawford. A. & Switzer. J. (2015). *Mainstreaming Conflict Prevention in Development Co-operation: Tip sheet of the Links between Pastoral Livelihoods and Conflict Prevention*. International Institute for Sustainable Development.

¹³² Sasch, J. & Warner, A. (2015). *Natural Resource Abundance and Economic Growth*. NBER Workingpaper No. 5398, December

2.3.2 Population Growth

Bruyn asserts that the global crisis has mostly been caused by the massive growth rate in all developing countries that was agreed upon by western researchers in the 1970s.¹³³ Massive growth rate has caused a completion on natural resources therefore causing environmental crisis. Every resources used by each and every person is connected to the ecosystem and the population growth. Population growth increases creation of waste, environmental degradation and uses of resources. They are additionally exacerbated by utilization propensities, certain innovative improvements, and specific examples of social associations and resource administration.¹³⁴

According to Moss a significant stimulus to the present in 1987, the World Commission on Environment and Development report indicates that the relationship between population issues and the environment mostly involves around supportable advancement.¹³⁵ The report continues to explain how population rate affects the environment due to human activities and their daily comforts thus environmental crisis need to control the development of population so as to control the environmental crisis.¹³⁶

¹³³ Bruyn, S. (2014). Explaining the Environmental Kuznets Curve: *Structure Change and Intentional agreements in Reducing Sulphur Emission*. *Environmental and Development Economics* 2:485-503.

¹³⁴ Olusegun, O. (2015). Economic Growth and Environmental Quality in Nigeria: Does Environmental Kuznets Curve Hypothesis Hold? *Environment Research Journal*, 3 (1): 14-18.

¹³⁵ Moss, R. (2010). *Protecting Our Planet, Securing Our Future: Linkages among Global Environmental Issues and Human Needs* UNEP Nairobi

¹³⁶ Day, K. & Grafton, R. (2013). Growth and the Environment in Canada: An Empirical Analysis. *Canadian Journal of Agricultural Economics* (51): 197-216.

According to Pesaran, Shin and Smith as the number of humans much increment, the potential for irreversible changes of broad extent leads to increments.¹³⁷ Pointers of serious environmental anxiety are the developing loss of biodiversity, intensifying ozone depleting substances, growing cutting of trees, exhaustion of the ozone layer, rain, topsoil and shortages of fuel, food and water all over the world. An investigation by Taylor and Brock demonstrates that while both developing and developed nations have added to worldwide environmental issues, developed nations with 85% percent of the gross world products and 23% of its population represent the biggest piece of mineral and petroleum derivative utilization, bringing about huge environmental effects.¹³⁸ With current advances, introduction levels of utilization by the developed world are probably going to result to genuine negative outcomes for all nations. This is particularly clear with the increments in environmental carbon dioxide and follow gasses that are together with industrialization, which have the potential for changing universal atmosphere and raising sea level.¹³⁹

The connections between human population, economic improvement, and the indigenous habitat are unpredictable.¹⁴⁰ Examination of local and territorial contextual analyses uncovers the impact and association of numerous factors. For instance, environmental and economic effects change with population structure and supply, and with provincial urban and universal movements. Moreover, poverty and absence of economic opportunities

¹³⁷ Pesaran, H., Shin, M. & Smith, R. (2011), Bounds Testing Approaches to the Analysis of Level Relationships, *Journal of Applied Econometrics*, 16: 289-326.

¹³⁸ Taylor, M. & Brock, W. (2014). Economic Growth and the Environment: A Review of Theory and Empirics, *Department of Economics Discussion Paper 2004-14*, University of Calgary.

¹³⁹ Torras, M. & Boyce, J. (2013). Income, inequality, and pollution: A Reassessment of the Environmental Kuznets Curve. *Ecological Economics* (25): 147-160.

¹⁴⁰ Greene, W. (2013). *Econometric Analysis*. 5th ed. New York: Prentice Hall, USA

motivate fast population development and increment motivators for environmental degradation by empowering abuse of negligible resources.¹⁴¹

Selden study also shows that both developed and developing nations confront an incredible situation in reorienting their beneficial exercises toward a more amicable association with nature.¹⁴² This test is emphasized by the uneven phases of improvement. In the event that all individuals of the world consumed petroleum derivatives and other natural resources at the rate now normal for developed nations (and with current advances), this would extraordinarily increase our officially unsustainable requests on the biosphere. However improvement is a real desire of less developed and transitional nations.¹⁴³

The rising population and the environmental disintegration confront the test of practical improvement.¹⁴⁴ The presence or the nonattendance of ideal natural resources encourage or impede the procedure of and socio-economic development. Population development and socio-economic development are adding to numerous genuine environmental cataclysms. These incorporate overwhelming weight ashore, arrive degradation, backwoods, territory pulverization and loss of biodiversity.¹⁴⁵ Changing utilization design has prompted rising

¹⁴¹ Barrett, S. & Graddy, K. (2014). Freedom, Growth and the Environment. *Environment and Development Economics* 5: 433-456.

¹⁴² Selden, T. (2015). Environmental quality and development: is there a Kuznets curve for air pollutions? *Journal of Environmental Economics and Management* 27: 147-162

¹⁴³ USAID/REDSO (2012). Assessment Report on Greater Horn of Africa, peace Building Project. Washington USA, Management Systems International 2002 pp.41-42

¹⁴⁴ Ibrahim, E. (1997). Wajir Community Based Conflict Management Seminar Paper for the USAID Conference on Conflict Resolution in the Greater Horn of Africa.

¹⁴⁵ Borghesi, S. & Vercelli, A. (2013). Sustainable globalization *Ecological Economics* 44: 778-789
CrossRefGoogle Scholar

interest for vitality. The ultimate results of this are air contamination, a dangerous atmospheric deviation, environmental change, water shortage and water contamination.

According to the respondents, Kuresoi is also experiencing population increase mostly in Kiptagich, Tinet, Sirikwa and Kamara which were most of the cited areas.¹⁴⁶ The weights on the environmental impact increase each day as the population develops. The developing patterns of populations and subsequent interest for sustenance, vitality, and housing have impressively modified land-use exercises and extremely corrupted the environment.¹⁴⁷ In a span of 10 years that is between 1999 and 2009 where the census was conducted the percentage increase is noted to be 27% which is high compared to Nairobi which is the capital city of Kenya with a 35% population increase within that time.¹⁴⁸

Mohammed assert that unless the link between the increasing population and the life emotionally supportive network can be balanced, improvement programs, whatsoever, imaginative are not liable to yield required outcomes.¹⁴⁹ Population effects on the environment basically by common resources and creation of waste and is related with environmental anxieties like the contamination of air and water, biodiversity and arable land growth rate. Human population issues are critical with regards to our lifestyle and our lives on earth. Poverty is a result of both causes and impacts of environmental war. The

¹⁴⁶ Kamande Kabiru Kapsita 14/08/2017

¹⁴⁷ Stern, D. (2012). Explaining changes in Global Sulfur Emissions: An Econometric Decomposition Approach, *Ecological Economics* 42: 201-220.

¹⁴⁸ Adediran O. (2012). An Assessment of Human Development Index & Millennium Development Goals: Poverty level as an evidence of unemployment in Nigeria. *International Journal of Politics and Economics (IJOPEC)* 4 (3) 31 – 40.

¹⁴⁹ Mohammed. S, (2012). *Poverty and development management*. Masters of Science, University of Birmingham. Unpublished paper.

round connection of poverty and the environment have a great impact. Unsustainability may be encouraged by imbalance because poor people, rely on the natural resources more than the rich people and therefore they are responsible for draining up resources as they do not have other ways of getting the resources. Environmental conflict fastens the procedure of impoverishment, as the poor depend specifically on the resources.¹⁵⁰

Sasch and Warner posits that urbanization is mostly being caused by lack of better income in the rural areas resulting to massive movements of people to town.¹⁵¹ These movements are causing the urban slums to grow and develop and these has also caused conflict to the environment and commonly in the urban areas. It has enlarged the gap between request and distribution of infrastructural facilities including vitality, housing, transport, communication, education, water supply and sewerage and recreational facilities, thus draining the valuable environmental resource base of the urban communities. This results to the developing pattern in disintegration of air and water quality, waste increment, the multiplication of slums and undesirable land utilization add to urban poverty.¹⁵²

2.3.3 Climate Change

Environmental change, one of the greatest challenge of the 21st century, not just introduces an additional test in adapting to peaceful conflicts but also in understanding the

¹⁵⁰ Ellis J. (2015). Vulnerability and Complex Ecosystem Dynamics Implications for Development in Living with Uncertainty: New Directions in Pastoral Development in Africa. I, Scoones (ed) *International Institute for Environment and Development*. London.

¹⁵¹ Sasch, J. & Warner, A. (2015). *Natural Resource Abundance and Economic Growth*. NBER Workingpaper No. 5398, December.

¹⁵² Vogel, M. (2013). *Environmental Kuznets curves. A Study on the Economic Theory and Political Economy of Environmental Quality Improvements in the Course of Economic Growth* Berlin Springer.

multifaceted nature at their foundations.¹⁵³ The high climatic varieties seen in the course of recent decade's increment dangers and instabilities that debilitate the prosperity of most provincial groups that rely on normal resource-based lives. Atmosphere changeability shows in outrageous occasions eminently dry spells and surges, which have expanded in recurrence and seriousness in the course of recent decades. Long times of dry spell are currently a consistent event crosswise over sub-Saharan Africa, particularly in arid and semi-arid areas (ASALs) occupied by pastoral groups, whose primary occupation is domesticated animals raising. An examination of atmosphere fluctuation in Kuresoi demonstrate that atmosphere inconstancy and change is not a marvel without bounds, but rather one of the later past, as the zone is hotter and drier than it was 100 years.¹⁵⁴

The causes and environmental effects of environmental change are an immortal political issue. Excellent meteorological occasions and extraordinary temperatures are happening with increasing recurrence, not phenomenally with great results for human and nature. Since the universal normal air temperature started to increase perceptibly, the open discussion on environmental change and global temperature boost stretched out from the literature to the prominent media.¹⁵⁵ A horde of studies, construct pretty much in light of

¹⁵³ Mohammed. S, (2012). *Poverty and development management*. Masters of Science, University of Birmingham. Unpublished paper.

¹⁵⁴ Perman, R. and D. I. Stern (2013). Evidence from Panel Unit Root and Cointegration Tests that the Environmental Kuznets Curve Does Not Exist, *Australian Journal of Agricultural and Resource Economics* 47: 325-347.

¹⁵⁵ Musa, J. (2010) Nigeria's Rural Economic Development Strategy: Community Driven Development Approach. *AU Journal of technology* 13 (4) 233 – 241.

logical proof, were attempted keeping in mind the end goal to check or to invalidate the event of anthropogenic an Earth-wide temperature boost.¹⁵⁶

The discussion brought forth supporters and contenders; the rise of purported environmental positive thinkers and pessimists pulled in growing public consideration. Late natural debacles like once-in-a-hundred-year surges and cataclysmic dry spells everywhere throughout the world realized significant financial misfortunes, influencing an ever increasing number of individuals.¹⁵⁷ Along with this stressing pattern, the offer of environmental change deniers, who are acting to undermine open trust in the logical confirmation on an Earth-wide temperature boost, seems to recoil. In the meantime, the relief of contamination turns into growing public concern. The point of the up and coming open activity is to stay away from environmental debasement in a viable and financially maintainable way; in this manner, the principle challenge is to distinguish impacts in the connection between economic activities and the environment.

According to the USAID/REDSO report, the world's normal temperature is aimed to grow by 1.5°C - 6°C by 2100, due to changes in precipitation and weather patterns.¹⁵⁸ The period a crop takes to grow is expected to decline by 5 - 20% in 2020 and over 20% by 2050 with suggestions for harvest and field profitability. These patterns are, because of their immediate consequences for natural resources, liable to negatively affect the dominant part

¹⁵⁶ Shahbaz, M., Jalil, A. & S. Dube (2010). Environmental Kuznets Curve (EKC): *Times Series Evidence from Portugal*, University, Islamabad, Pakistan, California State University, Sacramento (CSUS), Sacramento, CA, USA.

¹⁵⁷ Stern, D. (2012). Explaining changes in Global Sulfur Emissions: An Econometric Decomposition Approach, *Ecological Economics* 42: 201-220.

¹⁵⁸ USAID/REDSO (2012). Assessment Report on Greater Horn of Africa, peace Building Project. Washington USA, Management Systems International 2002 pp.41-42

of rustic family units that depend on product and domesticated animals based occupations.

¹⁵⁹ By causing asset shortage, broadened dry periods can possibly catalyze asset based conflicts in Kuresoi where touching resources are shared among Kalenjin, Kikuyu, Kisii, Luhya, Maasai and the forest dwelling Ogiek communities.

This pattern is occasioned by rainfall regimes and relief. Abundant rainfall and favorable ecological zone form favorable areas for both settlement and grazing since in such conditions exist water and pasture.¹⁶⁰ Conversely it can be a source of conflict with various groups from unfavorable areas aiming to have access to these resources. The question of control of such favorable zones and their resources generate conflict even among the groups occupying the very zones. A common feature of conflict in pastoralists is that it is intensive in wet areas neighboring dry ones. Conflict is hence transported from dry zones to focus in wet zones.

According to Taylor and Brock the conflict as a result of climate change normally involves groups that want access and the ones that protects and control resources.¹⁶¹ It occurs both within and even outside Kuresoi area and is the most violent. Conflict is of high intensity in such points as people try to gain access and control. In recent times some regimes have been created by both the Government and Community to manage such resources. However

¹⁵⁹ Selden, T. (2015). Environmental quality and development: is there a Kuznets curve for air pollutions? *Journal of Environmental Economics and Management* 27147162

¹⁶⁰ Pesaran, H., Shin, M. & Smith, R. (2011), Bounds Testing Approaches to the Analysis of Level Relationships, *Journal of Applied Econometrics*, 16: 289-326.

¹⁶¹ Taylor, M. & Brock, W. (2014). Economic Growth and the Environment: A Review of Theory and Empirics, *Department of Economics Discussion Paper 2004-14*, University of Calgary.

such regimes are vulnerable during a time of pestilence or drought where negotiation are least seen as necessity.

2.4 Economic Conflict in Kuresoi Sub-county

2.4.1 Historical Issues

Kenya has emerged as a nation characterized by armed conflict in many of its Provinces.¹⁶² The approach of the national general elections every five years brings back memories of deaths and instability in the Rift Valley Province and in many of Kenya's other provinces. According to a study by Akiwumi, before the advent of multiparty in 1991, no clashes had been witnessed between the local communities in the Rift Valley.¹⁶³ They co-existed peacefully until the bad seed of hatred was planted among them. Both at national and local level, politicians, MPs and civic leaders used historical land issues and ethnicity to whip up communities against each other and raise more votes and violent clashes between ethnic groups erupted across the country from 1991 to 2008. Kenya National Commission on Human Rights (KNHCR), further established that, conflict started when opponents of ex-president Daniel Arap Moi claimed he exploited factional violence through competition over land and ethnic patronage to bolster his own power and to discredit a multi-party approach to politics that was restored in 1991 and in 1992, an estimated 2000 people died and 20,000 were made homeless in ethnic clashes in Western Kenya.

¹⁶² Republic of Kenya (2016). *Development Policy for the Arid and Semi-Arid Lands (Asal)*. Nairobi: Government Printer, Kenya. 111-129.

¹⁶³ Akiwumi, A.M. Report of the Judicial Commission Appointed to Inquire into Tribal Clashes in Kenya, 31st July, 1999. 38-55.

According to Okwiri, violence stemmed from determination on behalf of KANU leaders to maintain one party governance.¹⁶⁴ As several politicians and church leaders called for an end to one party rule, KANU leaders, especially from Kalenjin and Maasai communities responded with calls of majimboism (ethnic regionalism) which among others called for all outsiders in the Rift Valley to return to their "motherland". This perpetuated a cycle of violence and areas that bore the brunt of the clashes included; Kamwaura, Londiani, Sitoito, Ternuyota, Enoosupukia and Tipis in Narok. The clashes continued even after the elections in 1993 in Kondoo Farm, Kiruka and Kaptagat areas in Burnt Forest. In Laikipia, there were mass killings of people, displacement and closure of schools. In 1993, fighting in the Rift valley between the Kalenjin and the Kikuyu killed 1,500 people, displaced about 300,000, and led to closing of schools which affected the education of children in the Rift Valley province.¹⁶⁵

Foreign observers accused authorities of pursuing a policy of ethnic cleansing in the fighting. Ethnic clashes were especially violent due to the availability and use of small arms, as well as erosion of traditional tribal power structures.¹⁶⁶ In 1997, Moi was reelected president for a five year term in chaotic and highly contested elections as local communities turned against each other. Hundreds of people were killed and houses torched, schools were closed as clashes erupted in Njoro, Mau Narok, Tipis and Likia in Molo constituency.

¹⁶⁴ Okwiri, J. (2013). Environment, population growth and productivity in Kenya: A case study of the Machakos District. *Development Policy Review* 10:359-387.

¹⁶⁵ Daniel Schwartz & Ashbindu Singh, Environmental conditions, resources and conflicts: An introductory overview and data collection (UNEP, New York, 1999) 3-7.

¹⁶⁶ Swain, A. (2015). Environmental Migration and Conflict Dynamics: Focus on Developing Regions. *Third World Quarterly*, 17:959-973.

Violence then spread to Nakuru municipality just after 1997 general elections, sparked by the government's decision to hive off part of Mau forest into a settlement scheme. Mt. Elgon district and parts of the North Rift have also been prone to armed conflict during each election year. From 2006 to 2008, Kuresoi remained volatile with the violence threatening to spread to neighboring district. Mt Elgon clashes have been linked with the 3rd phase of Chebyuk settlement scheme land allocations and politics. ¹⁶⁷

Kuresoi has over the years, witnessed sporadic attacks on people's homes by armed bandits for Livestock theft further aggravating the bad situation. ¹⁶⁸ In places like Sipili and OI Moran, a number of homesteads were deserted as owners fled due to insecurity as violent skirmishes locked the areas for 5 months leading to the closure of 11 primary schools in 2007. In May 2007, 162 people were displaced, five people including two children were killed, 15 houses and schools burnt down in Kuresoi. ¹⁶⁹ The Waki Report in the Post-Election Violence (PEV) in Kenya reveals that a total of about 1550 people died as a consequence of PEV. The geographical distribution of death was unequal with most of the PEV deaths concentrated in the provinces of Rift Valley.

Responses given by the interviewees shows that conflict in Kuresoi plays through three spheres of authority: The traditional where authority is exercised through customary or traditional law and therefore ¹⁷⁰re, conflict among a pastoralist tend to occur within, and is

¹⁶⁷ Oxfam. (2016). Survival of the fittest pastoralism and climate change in East Africa. Oxfam Briefing Paper 116, Oxfam International 131-384.

¹⁶⁸ Ogboru, I. (2016). Readings in economic development and planning. University of Ilorin press.

¹⁶⁹ Kenya Wildlife Service (2015). *Human wildlife conflicts, sources, solutions and issues*. [www document] available at: <http://www.safarweb.com/kwild/wildlife.htm>.

¹⁷⁰ Josphat Wanyama Molo Town 20/08/2017

regulated by this sphere. Similarly conflict in the post-election period was partly inspired by, and rationalized through this sphere. Another is the civil sphere where authority is governed by 'civil law'. For the most part, conflict in Kenya avoided this sphere and more so because, within this sphere, violent conflict has attracted international attention following the signing of the Rome treaty establishing the International Criminal Court (ICC) in July 2002.¹⁷¹ The predatory sphere which is partly a creation of the proliferation of the small and light weapons, and democratization process of the 1990s is another sphere. Carjacking, SALW--related urban conflicts, and commercialized livestock are some types of the predatory sphere of conflict. As a result of the inter-related nature of the three spheres of conflict, responses tend to be inadequate. This has allowed the drivers of conflict to overlap the three spheres in order to maximize their opportunities.

2.4.2 Socio-Political Factors

For the most part, environmental politics are driven by large long term trends in economic development, demographic change, and the slow degradation of natural systems.¹⁷² The response to the deterioration of the natural environment tends to be incremental and piecemeal. A traditional explanation that has been advanced for environmental policy shifts is the classic “grievance” or “strain” thesis. Ahmed show that grievances and strains affect mobilization and conventional wisdom suggests that these may influence public opinion

¹⁷¹ Kioko J. & Okello M. (2015). Land use cover and Environmental changes in a Semi-arid range Land, Southern Kenya. *Journal of Geography and Regional Planning* Vol. 3(II), PP 322-326

¹⁷² Gitari, Beatrice Njeri. 2015. "Environmental conflict and national security in Kenya: Case study of Turkana community." University of Nairobi , Nairobi.

and public policy.¹⁷³ In this sense, the environmental movement is very similar to other social movements. However, one unique characteristic of environmental politics is the policy impact of dramatic incidents. Unlike most social movements, environmental conditions can create large scale incidents that have the power to shift environmental politics.

In his analysis of environmental disasters and their impact on the policy process, Olusegun centers on the concept of focusing events.¹⁷⁴ He defines focusing events as large disasters that “change the salience of issues and sometimes replace indicator-based analyses with much more emotionally charged examples of policy failure and the need for reform. His empirical analyses show that focusing events draw increased attention to a problem. However, “increased attention is a necessary, but not sufficient, condition for event-related policy change. Rather, the increased attention creates a window of opportunity in which political actors can mobilize for new policy directions. The news coverage of an event generally focuses on the scope, extent of visible and tangible harm, and the novelty of the event.¹⁷⁵

¹⁷³ Ahmed, A. (2011). Urbanisation and the Challenges of development. *Journal of sustainable development in Africa* 13, (7) 210 -235.

¹⁷⁴ Olusegun, O. (2015). Economic Growth and Environmental Quality in Nigeria: Does Environmental Kuznets Curve Hypothesis Hold? *Environment Research Journal*, 3 (1): 14-18. Kjellstrom, T & Mercado. S (2015). Environment and Urbanisation. *International institute for Environment and development. (IED)* 20 (2) 551 – 574.

¹⁷⁵ Kjellstrom, T & Mercado. S (2015). Environment and Urbanisation. *International institute for Environment and development. (IED)* 20 (2) 551 – 574.

Under certain conditions, this event can develop into a longer-term reaction in the policy making community.¹⁷⁶ The response of the political community is dependent on two factors. First is the degree to which the pro-change community is organized. If no group exists to react to the event, the event will fail to gain more than passing attention. Thus without an organized institutional advocacy component, the window of opportunity created by a focusing event can pass without any significant policy change. Secondly, the degree of polarization in the policy community impacts the extent of policy change. As Ogboru notes: “The most polarized communities will find that events have relatively little influence on the overall trend in policy.”¹⁷⁷ A greater extent of polarization results in a vigorous defense of a coalition’s core beliefs, even in the face of a highly dramatic event. However, if the pro-change community is well organized, and the policy community is not highly polarized, focusing events can lead to a process of event related learning, in which new ideas and information are applied to environmental policy decisions and greater potential for policy change.¹⁷⁸

2.4.3 Under-development in the Area

Poor people in the society are generally accountable for being the cause of most of the issues.¹⁷⁹ One of the latest issues they have been accused of is causing of environmental conflict. Generally, it has been brought to account that it is indeed true that poverty is one

¹⁷⁶ Bayode, J., Emmanuel, A. & Sogbon O. (2011). Environmental implications of oil exploration and exploitation in the coastal region of Ondo state Nigeria: A regional planning appraisal. *Journal of Geography and Regional Planning*. Vol. 4 (3) pp 110 -121.

¹⁷⁷ Ogboru, I. (2016). Readings in economic development and planning. University of Ilorin press.

¹⁷⁸ United Nations Development programme (UNDP) Report (2014)

¹⁷⁹ Matiru V. (2000) Conflict & Natural Resource Management, Food & Agriculture Organization (FAO); Buckles D and Rusnak D(1999) “Cultivating Peace: Conflict and collaboration in Natural Resource Management” IDRC/World Bank 1999 p. 3 & 4;

of the main causes of environmental conflict. Looking at the Klugger Commission report; he states that poverty is a major cause of environmental issues and is also an important center of all viable program to manage environmental concerns.¹⁸⁰ Along comparative lines, Kioko and Okello sets that, it is for the most part acknowledged that environmental conflict, quick population development and stale generation are firmly connected with the quick spread of intense poverty.¹⁸¹

According to one of the respondent as quoted, “*poor families due to lack of good income and in need of food, water and housing cut trees to meet these needs and these affects the soil nutrients.*”¹⁸² Some of the respondents indicated that some of the cusses of socioeconomic decoration in Kuresoi include out demographic, social, and institutional factors as vital factors in the poverty environmental degradation nexus. A perplexing web of these variables in addition to input circles from environmental degradation to poverty make the way toward distinguishing links to casualty, if there is, between these two ideas a non-trifling activity.¹⁸³

¹⁸⁰ Kenya Land Alliance, (2010), “National Land Policy in Kenya: Addressing Historical Injustices”. Issues Paper No.

¹⁸¹ Kioko J. & Okello M. (2015). Land use cover and Environmental changes in a Semi-arid range Land, Southern Kenya. *Journal of Geography and Regional Planning* Vol. 3(II), PP 322-326

¹⁸² Kabiru Kanja Kihingo 08/08/2017

¹⁸³ RANTCO, Research and Training Consultants (2016). *ALRMP Study on Land Tenure and Resource Management in Kenya. Legal Framework on Pastoral Land tenure and Legislation for the Arid Lands of Kenya*, Republic of Kenya, Office of the President, Department of Relief and Rehabilitation, Nairobi.

According to KNBS poverty is an all-round issue that includes social, political and cultural factors that are beyond financial needs.¹⁸⁴ Researchers have been attempting to build up a hypothetical way to deal with poverty and conflict for a long time. Greater part of the interviewees concurred that poverty because of absence of human needs prompt responses that outcome in conflict. The human needs theory championed by Parvin and Shaw contends that there are conflict and worry in developing nations since individuals are denied their natural needs, as well as mental requirements that are associated with growth.¹⁸⁵ The main focus of this theory is the fundamental requirements (for example, food, water, shelter and clothing) not at all like intrigue can't be exchanged, smothered, or expected; accordingly any efforts to do this, results to conflict.

According to Sobania, the greatest threats of mankind are not from the threatening nature of man, it is from poverty and corruption.¹⁸⁶ The poor use all means that lead to conflicts, as they try to look for compensation when they have no other means of making their condition better. Soundness and peace cannot be held where there is a pool of poverty.

One of the interviewee indicated that in Kuresoi the case is that of supreme poverty (poverty qua poverty). This implies to absence of fundamental needs (like food, shelter, clothing and health) in Africa is the basis of conflict (however, as an issue of accentuation

¹⁸⁴ Kenya National Bureau of Statistics (2016). Kenya Household and Economic Survey Report, Government Printer, Nairobi, Kenya

¹⁸⁵ Parvin, G. and Shaw, R. (2011). Climate Disaster Resilience of Dhaka City Corporation: An Empirical Assessment at Zone Level. *Risk, Hazards & Crisis in Public Policy*, 2(2) Art.6.

¹⁸⁶ Sobania N. (2011). Feasts, Famine and Friends: Nineteenth Century Exchange and Ethnicity in the Eastern Lake Turkana Region. In: Galaty J.G. and Bonte P., *Herdsmen, Warriors, and Traders: pastoralism in Africa*, Westview, Oxford, San Francisco, Boulder CO.

all African nations are not similarly poor and similarly conflict inclined). 'Poverty qua poverty' is a case where no person would be placated with, due to the horrifying agonies that follow the absence of these fundamental needs. Subsequently, individuals by and large respond contrarily to such circumstance, keeping in mind the end goal to demonstrate their grievances and discontent, especially when the legislature is corrupt.¹⁸⁷ Conflicts are frequently caused by a trial to look for these essential needs by all means. Kuresoi, has an unstable blend of poverty and conflict which has kept on being ineffectively developed. Subsequently, as long as total poverty (which is established on political corruption) stays in Kuresoi, conflict is inescapable.

Pastoralism plays an important role in the economy of Kuresoi and in Kenya in general. Aside from the supply of meat and other animal items, pastoralism makes gainful utilization of an expansive rate of the accessible dry grounds where the shortage and changeability of its common resources has couple of option employments. In spite of the fact that not all that transparently recognized via scene history, the Kuresoi pastoralist, including the Maasai, has broadly been a dynamic administrator of their characteristic resources. They have not just utilized these resources, but rather they have likewise controlled their stock and rangelands to manage a sufficient level of profitability in basically minor environments.¹⁸⁸

¹⁸⁷ Fratkin E. (2015). Resurgence of Inter-Pastoralist Warfare in Kenya. Paper presented to Panel *Resurgence of Ethnic Conflict and Tribalism in Africa*, American Anthropological Association Annual Meetings, Atlanta GA, Dec. 1, 2015.

¹⁸⁸ Omondi, L. (2015). Migration and Environmental Hazards. *Population and Environment*, 26:273-302.

A few of the interviewees showed that until lately the Maasai have practised transhumance which was made conceivable because of the wealth of land and low population levels of both human and domesticated animals. Hence, this land usage sort made compelling utilization of expansive tracts of land and in the meantime kept up its profitability. Their transhumant grouping designs have been tuned in to the biological substances of dry land zones where precipitation and touching are liable to high hazard and occasional fluctuation.¹⁸⁹ They have enabled vegetation to be restored each year as they turned to impermanent movement.

The interviewees indicate that such movement has basically been a conventional dry season adapting methodology and has had constructive outcomes to the environment in that it enabled the affected region to recover. The present developments by the Maasai are distinctive in that they are to a great extent an aftereffect of state approaches in essence. Such movements of pastoralists are, in no way, shape or form, without a few impacts on both the physical and socio-social environments of the accepting regions or goals. The impacts of movements on the environment are significant and complex in light of the fact that the vagrants frequently begin from altogether different socio-biological zones and need to adjust to new land administration frameworks to consent to the nearby environmental conditions.¹⁹⁰ Such impacts are not just of quick worry to the administrators of regular resources and poverty easing endeavors at the national level, but on the other hand are of critical significance to resource utilize struggle determination at the local level.

¹⁸⁹ Kapteijns L. (2013). *Women and the Crisis of Communal Identity: the Cultural Construction of gender in Kenya History*, African Studies Centre Working Papers, Boston University, Boston.

¹⁹⁰ Kimani, A. (2015). *Environmental Degradation and High Fertility in Sub-Saharan Africa*. Morrison.

As effectively brought up in the introductory area, poverty and environment are connected in a close yet complex way. Needy individuals live and experience the ill effects of debased environments, and all the time they make environmental degradation on account of their poverty. Ochieng and Maina gives a case of the agriculturists in the highlands of Kuresoi.¹⁹¹ He contends that they don't cultivate steep or disintegrated slopes through perversity however they do as such through need. It is further contended that devastated individuals frequently should settle on here and now decisions exclusively on their urgent requirement for sustenance and that numerous ranchers have no contrasting option to cutting trees for kindling or putting animals on overgrazed on the very practices that affect the environment. While weights of poverty can imply that domesticated animals prompt to overgrazing, it is erroneous to expect that this will essentially happen. The long held view that poverty powers individuals to exhaust and obliterate environmental resources to address their issues is progressively being addressed.¹⁹²

Alternatively, debased environments themselves make and develop poverty, as they fuel the introduction of the poor to the assaults of nature, as did the dry spells in the region as seen in 2017, and make them neglect to achieve reasonable livelihoods. The proportional connections amongst poverty and environmental conflict is portrayed as the 'urgent ecocide' of poor people, little makers who 'cause soil disintegration since they are poor and edgy, and for whom soil disintegration in its turn intensifies their condition. Clearly the

¹⁹¹ Ochieng B. & Maina, T. (2012), *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees*, in Harvard Environmental Law Review, Vol. 33, pp. 349 – 403.

¹⁹² Migai Akech, "Land, the environment and the courts in Kenya," A background paper for The Environment and Land Law Reports, February 2006, 1 KLR (E&L) xiv-xxxiv.

environment is not nonpartisan in its consequences for poor people. Environmental quality is intervened by society, and society is not homogenous.

Mwanje suggests that the 'advancement process' includes the change of social and financial relations.¹⁹³ It identifies with the courses in which people and groups inside society encounter their environment and the routes in which they utilize it. Alternatively, the force of a social group's resource extraction from the environment and the resource's utilization designs is firmly identified with the concerned group's position in the social structure. The confidence in a negative descending winding of poverty and environmental degradation, a conviction that is currently broadly tested, has been wholeheartedly believed in the resource utilize divisions. However there is currently adequate confirmation to show that this reductionist speculation does not remain constant.¹⁹⁴ Though aggregate human activity influences national and worldwide rates of deforestation, these moves make put in a various scope of settings and full scale level investigations have neglected to demonstrate a typical example in the connection amongst poverty and forests.

This is additionally reverberated in Mwema investigation of the Usambara Mountains where it is contended that poverty is connected to the environment as well as must consider social and chronicled measurements of progress.¹⁹⁵ These studies additionally delineate that poverty may bring about a deficiency of alternatives driving individuals to clear forest cover so as to access arrive for development or to utilize characteristic resources in an

¹⁹³ Mwanje, K. (2011). The Dependence of Drought Intensity on Climate. *Nature*, 326:483 485.

¹⁹⁴ Karanja P. (2014). Cattle, Khat, and Guns: Trade, Conflict, and Security on northern Kenya's Highland-Lowland Interface. A Case Study, A paper prepared for the USAID Conference on *Conflict Resolution in the Great Horn of Africa*, June 2014, draft.

¹⁹⁵ Mwema, H. (2014). *Drought and Hunger in Africa; Denying Famine a Future*. Cambridge: Cambridge University Press.

unsustainable way, yet they also exhibit that destitute individuals can and do put significant time and resources in forest administration. Besides, the connection between forests and work improvement involves viewpoint. What may be characterized as deforestation or forest degradation by a scientist can be change through change of the resource into a more usable shape for nearby individuals, bringing about a resource frame that is no less practical or stable than the first forest.¹⁹⁶

Without a doubt, this is additionally qualified by Ahmed contending that the linkages between poverty and environment are backhanded and range particular.¹⁹⁷ Regularly it is expected that the link between poor people and the environment is that of a "descending winding" or endless loop. Needy individuals add to environmental degradation since they can't stand to save their natural habitat. Nevertheless, numerous experimental studies demonstrate that the connection between poverty and environment is not simply fate and anguish. In numerous ranges poor families deal with their soils, their property, assemble excrement, and harvest timber without exhausting the forests.¹⁹⁸ Agriculturists are imaginative, they enhance their insight methodically through experimentation. Both poverty and environmental conflict has been expanding in Kuresoi. There is a crucial need to begin with, assess and break down the poverty-environmental degradation nexus and second, to recommend approach choices to moderate or destroy these two issues. The essential target of the paper is to dissect fundamentally the current literature on the poverty

¹⁹⁶ Gitari, Beatrice Njeri. 2015. "Environmental conflict and national security in Kenya: Case study of Turkana community." University of Nairobi, Nairobi.

¹⁹⁷ Ahmed, A. (2011). Urbanisation and the Challenges of development. *Journal of sustainable development in Africa* 13, (7) 210 -235.

¹⁹⁸ Barrett, S. & Graddy, K. (2014). Freedom, Growth and the Environment. *Environment and Development Economics* 5: 433-456.

environmental degradation nexus and attempt to make "some request out of the conflict characteristic in this mind crucial subject.

2.5 Conclusion

The chapter has reviewed elements that lead to environmental conflicts globally and locally that undermine socio-economic development which the study has identified three main causes which include; land issues population growth, and climate change. The next chapter reviews the effects of environmental conflict on the socio-economic developments.

EFFECTS OF ENVIRONMENTAL CONFLICT ON THE SOCIO-ECONOMIC DEVELOPMENT IN KURESOI SUB-COUNTY, KENYA

3.1 Introduction

Chapter three presents effects of environmental conflict and its impact on socio-economic development in Kuresoi sub-county, Kenya. Focus is placed on key pillars of socio-economic development, economic conflict on development in Kenya where the key issues and challenges are presented and the chapter concludes with a review of economic conflict on development in Kuresoi, Kenya.

3.2 Key Pillers of Socio-Economic Development

The doctrine of 'socio-economic development' derives from a discipline in economics that has been evolving for almost two centuries.¹⁹⁹ The debate about whether Earth's limited natural resources will continue to provide life support for humanity's burgeoning population began with the work of the English political economist Thomas Malthus in the early 1800's. At the UN's Conference on Environment and Development or 'Earth Summit' held in Rio de Janeiro in 1992, diplomats from over 120 nations signed five pacts framing 'sustainable socio-economic development' as the overarching policy of the 21st century.²⁰⁰

¹⁹⁹ United Nation conference, (2015). Declaration of the UN Conference on the human environment.

²⁰⁰ Inyang, F. & Eleje, J. (2012). Poverty, Environmental Degradation and Sustainable Development: A discourse". *Global Journal of Human social science, sociology, economics and Political science*.

The 27 principles of The Rio Declaration on socio-economic development define the rights and responsibilities of nations as they pursue human development and well-being'.²⁰¹ Its many references to 'socio-economic development' suggest a form of development that integrates economic growth and environmental protection. Socio-economic development', by way of growth, development, and productivity, has guided conventional development science in the past. A community allocation of resources, sustained levels of growth and consumption, an assumption that natural resources are unlimited and a belief that economic growth will 'trickle down' to the poor have been its hallmarks. Socio-economic development expands development's concern with monetary capital to consider natural, social and human capital.²⁰²

Perman and Stern identified the overlap among economic, social, and environmental development, particularly the strong linkage between environmental conflict and socio-economic development.²⁰³ It is fitting that unprecedented attention has been given to 'socio-economic development in recent years, given the fact that authors like Martino and Zommers have focused on matters of economic underdevelopment and poverty alleviation in developing countries, and was late in responding to unprecedented threats to socio-economic development.²⁰⁴ Nonetheless, it would be mistaken to conflate the doctrine of

²⁰¹ Kamande, W. (2014). Environmental Conservation as an Engine for Economic Growth: *Testing the Validity of Environmental Kuznets Curve on Carbon Emissions for Kenya*. Unpublished MA Thesis, University of Dares Salaam.

²⁰² Usenobon, A. & Chuku, K. (2011). Economic Growth and Environmental Degradation in Nigeria: *Beyond the Environmental Kuznets Curve*, University of Uyo, Nigeria

²⁰³ Perman, R. & Stern, J. (2013). Evidence from Panel Unit Root and Cointegration Tests that the Environmental Kuznets Curve Does Not Exist, *Australian Journal of Agricultural and Resource Economics* 47: 325-347.

²⁰⁴ Martino D. & Zommers, Z. (2011). Environment for Development. *World Commission on Environment and Development* (WCED), Oxford University Press, Oxford

environmental conflict into one of achieving socio-economic development. The protection of natural systems represents not an overarching panacea for achieving economic vitality and social justice, but a necessary component of an entire system for achieving economic, social and environmental development, in which economic reforms and social reforms are as important.²⁰⁵

Conflicts have the potential to increase the social distance between contending.²⁰⁶ Social distance is used here to refer to the willingness of members from different ethnic groups to live together as neighbors, to work in the same offices as colleagues and generally to be concerned about the welfare of an individual who is from a different ethnic group. In this study, parameters used to determine social distance included; persistence of inter-ethnic marriages, homogeneity or heterogeneity of ethnic groups in churches, schools, shopping centers and patterns of settlement in residential areas both rural and urban. The richest one billion of the world's population (approximately the OECD countries) experience very low violent conflict probabilities, the four billion people in economies in transition have a decreasing probability of violent conflict, while the poorest one billion people are likely to experience the highest probability of violent conflict.²⁰⁷

²⁰⁵ Okada, K. & Samreth, S. (2014). *Empirical Study on Environmental Kuznets Curve for CO2 in France: the Role of Nuclear Energy*. *Energy Policy*, 38, 4057-4063.

²⁰⁶ Wilson, J. (2012). Reexamining the Empirical Evidence for an Environmental Kuznets Curve, *Review of Economics and Statistics* 83: 541-551.

²⁰⁷ Krueger, H. (2015). Economic Growth and the Environment, *Quarterly Journal of Economics* 110(2): 353-377.

As a result of environmental conflict human development has been affected socially.²⁰⁸ Poverty and unemployment were identified as twin problems afflicting a large proportion of the people. Despite the enormous resources expended by the government towards poverty alleviation programmes, poverty in the county still persists.²⁰⁹ The causes of poverty include; unemployment, insecurity, landlessness, lack of basic services such as health, education, social services and high cost of borrowing. Women, children, female headed households, and the elderly people significantly bear the brunt of poverty. It is also acknowledged that most of the women in the county contribute more labour than men in agricultural sector while proceeds mainly go to men as the family heads.²¹⁰ There is need to create an enabling environment for creation of opportunities through; provision and maintenance of essential infrastructure, investment in human development and basic welfare; and where necessary guarding against human exploitation and environmental conflict.²¹¹

3.3 Economic Conflict on Development in Kenya: Key Issues/ Challenges

Similarly, there is some evidence that economic development and well-being fosters a decrease in violent conflict and more strict environmental regulations.²¹² The latter

²⁰⁸ Fogel, R. (2014). *The Escape from Hunger and Premature Death, 1700-2100: Europe, America, and the Third World*. 4th ed. Cambridge: Cambridge University Press.

²⁰⁹ Norman, J. (2016). Does the Environmental Kuznets Curve Describe how Individual Countries Behave? *Land Economics* 82: 291-315.

²¹⁰ Copeland, B. & Taylor, E. (2014). Trade, Growth, and the Environment, *Journal of Economic Literature* 42(1): 7-71.

²¹¹ Laplante, H. (2012). Confronting the Environmental Kuznets Curve. *Journal of Economic Perspective*, 16(1): 147-168

²¹² Shafik, N. & Bandyopadhyay, S. (2012), Economic Growth and Environmental Quality: Time series and Cross Sectional Evidence. *Background paper for World Development Report*, World Bank, Washington D.C.

phenomena is mainly based on the so-called environmental Kuznethypothesis, stating that at lower levels of economic development, environmental degradation increases, and at higher levels, environmental quality becomes valued higher as an affluent society can more easily afford to entertain high environmental quality. This hypothesis is however contested and empirical evidence is mixed for different pollutants. Regarding democracies and economic development, it should also be pointed out that the potential beneficial effects apply to these societies and their citizens themselves. It does not necessarily inform on how such societies affect other countries and their environment and economic well-being, especially if those other countries are entrapped in conflicts.²¹³

In Kenya, economic development is not only affected by environmental quality but also conflict behaviour.²¹⁴ There is some evidence that economic development restrains violent conflict and that increased trade between nations goes along with less conflict. Thus, like democratic political structures, economic well-being is a positive factor in avoiding environmental degradation and conflict. To start with economic conflict has been fueled by tribal animosity and insecurity. The county has been experiencing ethnic differences that usually occur during the election cycle. This has sometimes led to several people becoming internally displaced, unwarranted destruction of property and loss of lives. This has been a hindrance to development hence has resulted to increased poverty in the county.

Auffhammer notes that Kenya's economic development is escalated by high levels poverty unemployment, low agriculture productivity, and an increasing dependency ratio which are

²¹³ Muritala, T. & Taiwo, A. (2011). Government Expenditure and Economic development: Empirical Evidence from Nigeria. *European Journal of Business and Management*. 3 (9) 18- 28

²¹⁴ Grossman, G. & Krueger, T. (2014). *Environmental Impacts of a North American Free Trade Agreement*, in P. M. Garber, (ed.). *The U.S.-Mexico Free Trade Agreement*, Cambridge, MA: MIT Press, pp. 13-56.

some of the major contributing factors to poverty in the county.²¹⁵ Other causes of poverty include poor marketing linkages for agricultural products, lack of affordable credit facilities for farmers and high costs of farm inputs. There is need to initiate programmes that reverse these trends with the aim of improving the living standards of the County's residents. The programmes should work towards promoting investments, use of modern techniques and practices in agriculture and acquisition of appropriate skills.²¹⁶

Poor infrastructure also hampers full realization of the county's potential in agriculture, manufacturing and foreign and domestic tourism.²¹⁷ The poor condition of roads has resulted in the high cost of transport thereby affecting the performance of various economic activities. Poor road network has also hindered access to social amenities. The main contributing Kuresoi Integrated Development Plan, factor to poor state of road in the county is inadequate funding for construction, rehabilitation and maintenance of both classified and unclassified roads.²¹⁸

The education sector is also challenged by economic conflict and development. The sub-sector faces a number of challenges which include increased school drop-outs, low completion rates, low transition rates and high costs of education (especially post-

²¹⁵ Auffhammer, M. (2014). Forecasting China's Carbon Dioxide Emissions: *A View Across Province*. Job Market Paper, University of California San Diego, Department of Economics.

²¹⁶ Torras, M. and Boyce, J. K., (2013). Income, inequality, and pollution: A Reassessment of the Environmental Kuznets Curve. *Ecological Economics* (25): 147-160.

²¹⁷ Kuznets, S. (2015). Economic Growth and Income Inequality, *American Economic Review* 45(1): 1-28.

²¹⁸ Dinda, S. Condo, D & Pal, M. (2016). *Air Quality and Economic Growth: An Empirical Study*. *Ecological Economics* 34(2); 409-423.

secondary levels).²¹⁹ This has led to inadequate skills needed to participate in economic development of the county. The poor are the most vulnerable implying that they may not be in a position to participate effectively in economic development of the county.²²⁰

Low access to health services is also experienced within the country. A significant proportion of the county's inhabitants cannot access health services due to inaccessible roads, inadequate health facilities and medical supplies.²²¹ This is especially the case in the rural areas where healthcare facilities are sparsely distributed hence hampering access by those living in the remote regions. Inaccessibility to clean water raises concerns in health due to poor sanitation and rampant water pollution. Inaccessibility to health services has resulted in people wasting a lot of man hour in seeking such services. Those completely unable to access the health services are sometimes rendered economically unproductive a fact that leads to high cases of dependency. Inaccessibility to health facility has also led to high child mortality rates and that of the general population.²²²

²¹⁹ Simon, A & Francis, T. (2015). "Human Capital and economic development". *Paper for African Development Report*.

²²⁰ Kjellstrom, T & Mercado, S (2015). Environment and Urbanisation. *International institute for Environment and development. (IED) 20 (2) 551 – 574*.

²²¹ Olusegun, O. (2015). Economic Growth and Environmental Quality in Nigeria: Does Environmental Kuznets Curve Hypothesis Hold? *Environment Research Journal*, 3 (1): 14-18.

²²² Barbier, J. (2016). Economic Growth and Environmental Degradation: *The Environmental Kuznets Curve and Sustainable Development*, World Development 24(7): 1151-1160.

3.4 Economic Conflict on Development in Kuresoi, Kenya

Many of those who had invested in business in Kuresoi suffered heavy losses as most of the centers were burnt during conflict since 1992.²²³ Saint Stephen's at Kapsita, Upper Sagaitim, Muchorwe, Jogoo and Mutate centers were all burnt during the violence.²²⁴ The ruins of some of the destroyed buildings were still visible when this research was being done. Many of the business premises such as shops and food Kiosks were first vandalized before being set on fire. A number of respondents also lost personal and household possessions such as academic certificates, title deeds, birth certificates, photo albums, bicycles, radio sets, television sets, sofa sets, utensils and clothing's.²²⁵ Kuresoi area is conducive for dairy farming. As such, sheep, cows and donkeys were common in almost every homestead. The sudden and unexpected attacks during violence meant that those with cattle were unable to move with them. In the ensuing confusion, they were compelled to abandon them.

One of the long term economic repercussions of the violence was that land that was previously used for farming and dairy keeping was abandoned by the owners because of insecurity.²²⁶ In the process of data collection, we observed that there some acreage of land lying fallow. On enquiry, we were informed that most of the owners relocated to other

²²³ Swain, A. (2015). Environmental Migration and Conflict Dynamics: Focus on Developing Regions. *Third World Quarterly*, 17:959-973.

²²⁴ Dinda, S., Condo, D. & Pal, M. (2016). *Air Quality and Economic Growth: An Empirical Study*. *Ecological Economics* 34(2); 409-423.

²²⁵ Kibunei Sawe Kamara 02/08/2017, Kiplet Lamai Sachang'wan 04/08/2017, Kiptele Samoei Kamara 07/08/2017 and Lawrence Mokaya Mukorombothi 01/08/201

²²⁶ RANTCO, Research and Training Consultants (2016). *ALRMP Study on Land Tenure and Resource Management in Kenya. Legal Framework on Pastoral Land tenure and Legislation for the Arid Lands of Kenya*, Republic of Kenya, Office of the President, Department of Relief and Rehabilitation, Nairobi.

places such as Nakuru, Nyandarua, Keringet and Uasin Gishu which are neighbouring Kuresoi.²²⁷

In time, some of the abandoned farms were used as grazing pastures.²²⁸ Disruption of agricultural activities has led to poor yields and consequently low income to a majority of farmers. Due to insecurity, many residents got to their farms around 9am and left at around 3 pm (5-6 hours of labor), and would then go back to spend the night in nearby towns and shopping centers where they had rented houses. This had been the routine of many since the 2008 Post-Election Violence. Previously, most of them could work on their farms for 8 – 10 hours.²²⁹ Much time was therefore wasted as they moved to and from their farms. Ogboru observed that in the areas where ethnic violence had occurred, there was a decline in production as many farmers had ran away due to insecurity.²³⁰

The cultivation of crops like maize, carrots, cabbages, kales and peas was also affected by the violence. Several factors contributed to this situation. There was disruption of links to the markets for this produce. Cosmopolitan market centres such as Muchorwe, Turi, Mukinyai and Keringet ceased to provide a large pool of customers on market days.²³¹ The lack of markets for their agricultural products made many people to abandon farming. The

²²⁷ Oxfam. (2016). Survival of the fittest pastoralism and climate change in East Africa. Oxfam Briefing Paper 116, Oxfam International 131-384.

²²⁸ Kenya Land Alliance, (2010), “National Land Policy in Kenya: Addressing Historical Injustices”. Issues Paper No. 2, 51-66.

²²⁹ Kenya National Bureau of Statistics (2016). Kenya Household and Economic Survey Report, Government Printer, Nairobi, Kenya

²³⁰ Ogboru, I. (2016). Readings in economic development and planning. University of Ilorin press.

²³¹ Republic of Kenya (2010). *Nakuru County Development Plan 2010-2015: Effective Management for Sustainable Economic Growth and Poverty Reduction*. Nairobi: Government Printer, Kenya.

Kipsigis were no longer free to take livestock, mursik (fermented milk) and sotet (gourds) to Molo and Elburgon markets, areas dominated by the Agikuyu and the Abagusii. Loss of income compelled many victims to depend on other family members and well-wishers for support. Dependency was high among those who moved from Molo. Consequently, dwellers of Kuresoi have been forced to rely on other family members in formal employment for basic needs, medical care and school fees. Such unplanned expenditures have strained the provider.²³²

Crime has also been on the rise as many people who took refuge in towns were deprived of honest means of earning income.²³³ This has particularly been so where a majority of those displaced lives. Residential areas such as Amalo, Kapsimbweywo, Kiptagich, Tinet, Kiptororo and Nyota have registered many incidents of crime in a month as compared to the pre 1992 period. Violent robberies have been on the increase. In an interview with a police officer based at Molo Police Station confirmed that incidents of both petty and violent crimes increased since 1992.²³⁴

3.5 Conclusion

The preceding discussion has analysed the effects of environmental conflict on the socio-economic development in Kuresoi Sub-County, Kenya. The section shows that socio-economic conflict is instigated by destruction of the environment thus creating a need to

²³² Kenya Wildlife Service (2015). *Human wildlife conflicts, sources, solutions and issues*. [www document] available at: <http://www.safariweb.com/kwild/wildlife.htm>.

²³³ Kioko J. & Okello M. (2015). Land use cover and Environmental changes in a Semi-arid range Land, Southern Kenya. *Journal of Geography and Regional Planning* Vol. 3(II), PP 322-326

²³⁴ Kiplagat Tegelei Tinga Juu 02/08/2017

the community and individuals as well. Needy individuals, who are in charge of a critical offer of the misfortunes due to their squeezing flow of requirements for the development of resources such as water, land, and fodder that affect the society greatly. The next chapter will be chapter four and will address other emerging issues.

CHAPTER FOUR

EFFICACY OF MECHANISM TO RESOLVE ENVIRONMENTAL CONFLICTS

4.1 Introduction

This section will review mechanism set to resolve environmental conflict worldwide and narrow done on how the same can be applied to Kuresoi. Other emerging issues relating to the topic will be reviewed presented.

4.2 Mechanism Adopted to Resolve Environmental Conflicts

Environmental conflicts are being experienced in most countries in the world, and yet, appropriate mechanisms have not yet been put to place to deal with the issue.²³⁵ The great need for natural resources among countries and individuals has led to conflicts and high cases of tension. Findings in chapter three have shown that the need for restoring and preventing degradation can cause conflict and enmity within communities. Conflict can be experience either between individuals, between the environment, a group or even a country or countries due to distribution of resources and use of environmental resources in both urbans and the rural areas²³⁶.

The best approach to deal with environmental conflicts in an economical manner is for every one of the partners to collaborate in mutually overseeing, securing, and creating

²³⁵ Mwema, H. (2014). *Drought and Hunger in Africa; Denying Famine a Future*. Cambridge: Cambridge University Press.

²³⁶ Njeri, M. (2016). Coping with Riverbank Erosion Hazard and Displacement in Bangladesh: Survival Strategies and Adjustments. *Disasters*, 13:300-314. Page | 75

natural resources.²³⁷ Partners should concur and set up strategies and modalities for settling the question if and when they emerge. This fundamental logic is a challenge to the administrators, managers, governments, local and global NGOs, and national and global organizations to look for methods for solving conflicts if conceivable, and settling them genially and adequately when they do emerge. In the event that there is goodwill, a need to maintain a strategic distance from conflicts, and an understanding that all parties can profit by a technique of utilizing elective conflict determination approaches, there is a genuine chance to reduce the harm caused by conflicts and move from potential conflict to potential collaboration.²³⁸

Other ways to resolute disputes include different methodologies for settling question in a peaceful manner, from arrangement between the two groups, a multi-party agreement, through intercession, to discretion and mediation.²³⁹ As per UNDP report environmental conflicts can be settled in different ways: Force where a choice put forward by drive on at least one of the groups.²⁴⁰ Arbitration where a choice rendered by an expert, state, organization, Court of Law, or Special Master. A few states dole out a Special Master who

²³⁷ Torras, M. and Boyce, J. K., (2013). Income, inequality, and pollution: A Reassessment of the Environmental Kuznets Curve. *Ecological Economics* (25): 147-160.

²³⁸ Swain, A. (2015). Environmental Migration and Conflict Dynamics: Focus on Developing Regions. *Third World Quarterly*, 17:959-973.

²³⁹ Ellis J. (2015). Vulnerability and Complex Ecosystem Dynamics Implications for Development in Living with Uncertainty: New Directions in Pastoral Development in Africa. I, Scoones (ed) *International Institute for Environment and Development*. London.

²⁴⁰ UNDP (2016). *Report on the Status of Drought Preparedness and Mitigation in Sub-Saharan Africa. United Nations (Volume 1)*. New York: Office of Combat Desertification and Drought, United Nations Development Programme (UNDP).

will go about as a judge or authority in environmental conflicts. Negotiation where a choice requiring an assertion among the groups.

In the past years, there has been different resolution approaches that have turned into a broadly acknowledged field with official/potentially administrative capacities in different countries.²⁴¹ In global relations, they play a great role in containing, overseeing and settling potential sources of conflict. While conflict can be hazardous, it additionally conveys the likelihood of delivering imaginative collaboration in a win– win arrangement. The way to this is for members to connect with as joint issue solvers, trying to determine the debate, and to attempt and "grow the pie" as opposed to going about as foes and interfering with the circumstance.²⁴²

The prevention, reduction, control and resolutions of conflict can be used to manage conflicts related to environmental resources.²⁴³ This process will be determined by the specific issues of environmental conflicts. Efficacy of mechanism to resolve environmental conflicts can either be short term or long term as will be discussed in the sections below;

²⁴¹ Parvin, G. and Shaw, R. (2011). Climate Disaster Resilience of Dhaka City Corporation: An Empirical Assessment at Zone Level. *Risk, Hazards & Crisis in Public Policy*, 2(2) Art.6.

²⁴² Barrett, S. & Graddy, K. (2014). Freedom, Growth and the Environment. *Environment and Development Economics* 5: 433-456.

²⁴³ Federal environmental Agency Act (2012) Cap. F. 10. *Laws of the federation of Nigeria*. International Union for the Conservation of Nature (IUCN), 1980. *World conservation strategy Living resource conservation for sustainable development*.

4.2.1 Short-Term Solutions

The crisis of environmental conflicts expects government to search for impermanent arrangements proposed for taking care of short-term destinations.²⁴⁴ Resolutions for short-term period should focus on avoiding potential natural misfortune and limiting unfriendly effects of environmental debasement. Following are some conceivable recommendations for handling short-term target. First, deforestation and loss of biodiversity, which used to be endemic in places possessing large amounts of natural resources, are, miserably, getting to be noticeably uncontrolled everywhere throughout the nation as financial development involves an enormous measure of contribution from natural environment. To solve this circumstance, the primary need is to fastidiously control unlawful pirating valuable resources to neighbor nations. .²⁴⁵

Forbiddance of trafficking or inconvenience of assessment on fare of rare materials, for example, wood, valuable minerals should be embraced, particularly in problem areas of smuggling.²⁴⁶ Furthermore, it is important to authoritatively urge individuals to recover forests. In spite of the fact that the nature of recovery woods is far underneath that of primitive forests, territory of different sorts of antiquated and profitable plants, recovery at any rate, in short-term, can make up for the loss of forests cover and in the meantime remain

²⁴⁴ Adediran, O. (2011). Human Development & assessment of millennium Development goals (1990 – 2010). *Ovidus University Annals; Economics Science series. XI (I) 34 -45.*

²⁴⁵ Inyang, F. & Eleje, J. (2012). Poverty, Environmental Degradation and Sustainable Development: A discourse⁷. *Global Journal of Human social science, sociology, economics and Political science.*

²⁴⁶ United Nation conference, (2015). Declaration of the UN Conference on the human environment.

soil richness.²⁴⁷ In financial improvement, legitimate deforestation is vital on the grounds that wood is vital material for some ventures, for instance development or inside furniture fabricate. In this manner, to guarantee that forests won't be presented to any harm, government must stick to guideline that keeps up adjust amongst deforestation and forestation rates, by which one plant chopped down will be replaced by a new one. Moreover, controls about giving farmers or firms' power on forestland must be explained plainly to maintain a strategic distance from potential conflict. In addition, government can use financial reward and discipline framework to support forestation.²⁴⁸

Industrial waste is additionally an unmistakable source of concern. The outcome of move from farming based economy to current economy depending on industry and administration Kenya has been battling with equivocal contamination because of extension of mechanical zones.²⁴⁹ The larger part of venture is centered in the office and generation line development just, while squander treatment framework is frequently precluded in speculation list. Processing plant proprietors and firm managers are roused exclusively independent from anyone else intrigue, so their objective is accomplished when they prevail with regards to offering items. In terms of the following stage, after creation, they

²⁴⁷ Usenobon, A. & Chuku, K. (2011). Economic Growth and Environmental Degradation in Nigeria: *Beyond the Environmental Kuznets Curve*, University of Uyo, Nigeria

²⁴⁸ Sasch, J. & Warner, A. (2015). *Natural Resource Abundance and Economic Growth*. NBER Workingpaper No. 5398, December

²⁴⁹ Kuznets, S. (2015). Economic Growth and Income Inequality, *American Economic Review* 45(1): 1-28.

don't give careful consideration. This pompous disposition makes negative culmination environment.²⁵⁰

Therefore, waste and sewage released from concentrated generation exercises are debasing water, soil and air at a disturbing rate.²⁵¹ Consequently, government must handle current issues gotten from rising mechanical zones by monetarily support them to change unpleasant creation strategies to cordial techniques and lawfully constraining them to introduce legitimate waste treatment strategies. If that business people attempt to overlook compulsory directions deliberately, there must be sanctions against them, from fining to denying business authorization. In intensely contaminated zones, government should actualize clearing of creation site from private spots to maintain a strategic distance from across the board medical issues, or suspend generation exercises of the offenders.²⁵² Assents will change as indicated by the earnestness of each case, and additionally the participation mentality of business people. Most importantly, the strategy will just produce results if expert obeys entirely and it is critical not to yield or to enjoy their each impulse. Expert of all levels is one of driving variables in enhancing the depressing circumstance in industrial zones.

²⁵⁰ Pesaran, H., Shin, M. & Smith, R. (2011), Bounds Testing Approaches to the Analysis of Level Relationships, *Journal of Applied Econometrics*, 16: 289-326.

²⁵¹ USAID/REDSO (2012). Assessment Report on Greater Horn of Africa, peace Building Project. Washington USA, Management Systems International 2002 pp.41-42

²⁵² FAO (2010), 'Global Forest Resources Assessment 2010, Forestry Papers, 140, Food and Agriculture Organization of the United Nations, Rome

Different strategies in relation to with arranging and building industrial zones must be taken into cautious thought.²⁵³ The way that manufacturing plants and modern zones are scattered around the nation makes it hard to oversee and prepare waste materials. In this way, we can profit by characterizing modern focuses inside particular ranges to encourage administration and also remedy to environmental mistakes caused by makers. Incidentally, to guarantee expected outcome, supervisory part should be obviously doled out to a specific administrative organization or to a particular unit. Analyzing generation exercises of creation offices nearly stays away from accidental outcomes and certification quick response to issues. Subsequently, a specific measure of venture ought to be coordinated to supervisory gear to react promptly to irregular environmental event.²⁵⁴

Contamination caused by plant security chemicals, pesticide or compost stirs new concerns about environmental quality and human health.²⁵⁵ In Kenya, contamination risen up out of agricultural exercises has emerged as the most cross-cutting issue lately. Centralization of horticultural chemicals utilized surpasses the permitted sum and gathers in soil and in rural items, causing wellbeing and environmental inconveniences.²⁵⁶ Over the top measure of harmful substances not consumed by plants, while entering into human tissues, is

²⁵³ Musa, J. (2010) Nigeria's Rural Economic Development Strategy: Community Driven Development Approach. *AU Journal of technology* 13 (4) 233 – 241

²⁵⁴ Udah, E. & Obguagu, R. (2012). Constraints to Economic Development and Growth in Nigeria. *European Journal of Scientific Research* 65 (4) 581 – 593.

²⁵⁵ Fogel, R. (2014). *The Escape from Hunger and Premature Death, 1700-2100: Europe, America, and the Third World*. 4th ed. Cambridge: Cambridge University Press

²⁵⁶ Kenya National Bureau of Statistics (2016). *Kenya Household and Economic Survey Report*, Government Printer, Nairobi, Kenya.

demonstrated to cause hereditary imperfection or, in some more genuine cases, deadly illnesses. Helpful fixings in arable soil are missing step by step in the wake of being abused in exorbitant way, at that point lethal substances from chemicals utilized amid trim constitute these healthy fixings, transforming arable into sour or malicious soil improper for duplicating.

Polluted arable land is truly basic in Kuresoi since it is a county of agriculture and the commitment of this sector in Kenya's GDP is still high.²⁵⁷ Therefore, various approach objectives have been set for agriculture, yet very few accomplishments have been achieved with respect to refine rural environment. More should be done before the situation declines to an unyielding degree. Denial of poisonous compound utilization will be essential in enhancing nature of arable land, and in addition avoiding medical problems. Although, outright preclusion of substance utilize may make harm rural generation, as under positive tropical atmosphere, the thriving of creepy crawlies will exceed the diligence of plants, bringing about little yield.²⁵⁸

In this way, aside from discharging controls concerning lethal utilization, science organizations must be urged to include in the mission.²⁵⁹ They are in charge of imagining new solid chemicals, environmentally agreeable pesticides and manures as salubrious

²⁵⁷ Kamande, W. (2014). Environmental Conservation as an Engine for Economic Growth: *Testing the Validity of Environmental Kuznets Curve on Carbon Emissions for Kenya*. Unpublished MA Thesis, University of Dares Salaam.

²⁵⁸ Kenya Land Alliance, (2010), "National Land Policy in Kenya: Addressing Historical Injustices". Issues Paper No.

²⁵⁹ RANTCO, Research and Training Consultants (2016). *ALRMP Study on Land Tenure and Resource Management in Kenya. Legal Framework on Pastoral Land tenure and Legislation for the Arid Lands of Kenya*, Republic of Kenya, Office of the President, Department of Relief and Rehabilitation, Nairobi.

substitutes for pernicious ones. Along with rising mindfulness and obligation campaigns planned for agriculturists, this may help fathom incompletely the problem of chemical use. Presently is not the first run through government has attempted to look for short-term answers for these requesting issues, however arrangements molded in composed frame have not been for all intents and purposes abused in a viable way.²⁶⁰ Thus, it is basic that they should upgrade the execution of these arrangements, all things considered, so beneficial outcomes on environmental change can truly be perceived.

4.2.2 Long-Term Solutions

Actually, as far as the division of some uncommon species, it was past the point of no return. There is no hope to bring life back to them.²⁶¹ Short-term targets ought to be set up to briefly oblige harm to bio-nature. Though, environmental degradation and biodiversity exhaustion can't be wiped out totally in the near future. Rather, it is a basic issue of life-time, or even hundreds of years to come. The ecosystem, from its earliest reference point, has never stopped to grow. It is the presence of people that effects and changes the primitive bio-biology for both the better and worse. In this way, it is sensible to expect no less than hundred-year length to almost recoup the first condition of biology. Aside from considering short-term answers for environmental change, government must set aside much opportunity to acknowledge long-term targets.²⁶² These goals are proposed

²⁶⁰ Sobania N. (2011). Feasts, Famine and Friends: Nineteenth Century Exchange and Ethnicity in the Eastern Lake Turkana Region. In: Galaty J.G. and Bonte P., *Herders, Warriors, and Traders: pastoralism in Africa*, Westview, Oxford, San Francisco, Boulder CO.

²⁶¹ Ahmed, A. (2011). Urbanisation and the Challenges of development. *Journal of sustainable development in Africa* 13, (7) 210 -235.

²⁶² Kioko J. & Okello M. (2015). Land use cover and Environmental changes in a Semi-arid range Land, Southern Kenya. *Journal of Geography and Regional Planning* Vol. 3(II), PP 322-326

for lessening contamination, as well as ensuring adequate resources for later use. Resolutions must be intended to coordinate these goals.

The best technique to control pollution and depletion in long-term is through use of legal processes.²⁶³ There are a few disadvantages existing in the contemporary law, which energizes improprieties certainly. Thus, the government must upgrade filling the space in lawful framework to maintain a strategic distance from illicit exercises. Changes in provisions connected with the misuse of natural resources is earnest, since over-exploitation is the fundamental purpose behind the loss of biodiversity.²⁶⁴ A great measure of resources have been dispossessed as key contribution for generation exercises without plan to recharge. Clearly, this indiscreet technique makes irregularity between obliterating rate and recuperating rate, so however plentiful natural resources are, they will be running out soon. This strategy has neither rhyme nor reason if there is no preface on which we base to assess what amount is sufficient. In this manner, along with directions controlling exploitation, a process of environmental criteria done on diligently.

A supportive arrangement criteria covers each subject of environment, for instance standard convergence of contaminations in air, water and soil or secure measure of natural reserves in long term.²⁶⁵ Additionally, government must clear up resources claim or

²⁶³ Amisi B. (2016). Conflict in the Rift Valley and Western Kenya. Seminar Paper presented to the USAID Conference on Conflict Resolution in the Great Horn of Africa.

²⁶⁴ Okada, K. & Samreth, S. (2014). *Empirical Study on Environmental Kuznets Curve for CO₂ in France: the Role of Nuclear Energy*. Energy Policy, 38, 4057-4063.

²⁶⁵ Vincent, J. (2015). Testing for Environmental Kuznets Curves within a Developing Country. *Environmental and Development Economics* (2):417-431

privatization of natural resource is not a terrible thought. Clearly, individuals have propensity to secure things better if they are to their own advantages. This can be connected to oversee other local resources. In any case, this idea may not be anything but difficult to acknowledge if there should arise an occurrence of air or water, since air and water are formless and dependably in movement. Useful situation is a great deal more modern. It requires our resourcefulness to deal with, or else startling clashes may be involved. Most importantly, regardless we can profit by privatization of natural resources. This strategy liberates government from keeping an eye intently on an a lot of scattered resources; rather, the proprietors of them will step up with regards to be accountable for their own particular resources.²⁶⁶

Improved planning and choice of advancement system rely on sensibly complete approaches.²⁶⁷ At large scale level, governmental strategies to manage speculation, development, modern structure, and ventures all affect environment. Subsequently, development rate ought to be kept at a sensible level perfect to the inborn perseverance of environment and in terms of foundation arranging, it is insightful to compute request of long term improvement ahead of time.²⁶⁸ Decision of a methodology will interface straightforwardly to environmental security in light of the fact that the technique itself relates to innovation, information and yield of the entire economy. Additionally, population

²⁶⁶ Barbier, J. (2016). Economic Growth and Environmental Degradation: *The Environmental Kuznets Curve and Sustainable Development*, World Development 24(7): 1151-1160.

²⁶⁷ Perman, R. and D. I. Stern (2013). Evidence from Panel Unit Root and Cointegration Tests that the Environmental Kuznets Curve Does Not Exist, *Australian Journal of Agricultural and Resource Economics* 47: 325-347.

²⁶⁸ Mohammed. S, (2012). *Poverty and development management*. Masters of Science, University of Birmingham. Unpublished paper.

development starting with one place then onto the next is likewise a key issue in environmental assurance. Pollution as it is known these days is only outcomes of human exercises. Looking for riches, individuals don't dither to make full utilization of accessible resources and discharge waste back to environment. ²⁶⁹

To some degree, the nearness of individuals postures risk to nature, so government ought to concoct proactive and judicious approaches to deal with planned movement or else dangerous outcomes might be unavoidable. ²⁷⁰Likewise, financial advancement plans comprehensively comprises of administration of industry, agriculture, development, benefit and local location with a specific end goal to accomplish quick and strong development rate. Starting as a poor nation, Kenya is currently in the transitional stage from rural to present day economy with accentuation on industry and administration divisions. In any case, the greater part of its population are as yet working in farming range and the vast majority of its items are work concentrated. ²⁷¹This reality is in opposition to the financial circumstance in developed states, whose products are innovation concentrated.

In reality, urbanization and modernization are considered important ways to deal with growth and improvement. To perceive the imperative part of this procedure to such a

²⁶⁹ Selden, T. (2015). Environmental quality and development: is there a Kuznets curve for air pollutions? *Journal of Environmental Economics and Management* 27:147-162

²⁷⁰ Opschoor, K. (2014). Economic Growth and Emissions: Reconsidering the Empirical Basis of Environmental Kuznets Curves, *Ecological Economics* 25: 161-175.

²⁷¹ Hettige, H., Mani, M. & Wheeler, D. (2015). Industrial Pollution in Economic Development. *Policy Research Working, Paper 23*, The World Bank. Geneva.

country as Kenya is not to deny the significance of environmental assurance. Indeed, to achieve practical advancement, these two missions must come as an inseparable unit. On account of globalization, the odds are accessible to each state, however rich or poor. Kenya, being a developing nation, has less favorable position over different nations, so it must be extremely watchful when opening the economy.²⁷² The advantage appears to be truly tempting, however the potential outcome on environment is in no way, shape or form less genuine.

Clearly, Kenya and Kuresoi in particular should be attentively mindful not to be a dump in the chain of production.²⁷³ Alternatively, globalization is not terrible in any way. In case of judicious, the territory can make benefits from this marvel. Generally, most nations encounter comparable course to flourishing, despite the fact that specifically, it might be marginally unique, contingent upon pragmatic conditions in every nation. Given the way that on same course, they encounter same opportunities and in addition hindrances, so Kuresoi can make use of this opportunity to gain from the pioneers.²⁷⁴ Rather than using lots of energy doing careful research, we can embrace innovation to manage environmental degradation from foreign sources. This compresses the length required to ensure and recuperate environmental loss.

²⁷² Ogboru, I. (2016). Readings in economic development and planning. University of Ilorin press.

²⁷³ Matiru V. (2000) Conflict & Natural Resource Management, Food & Agriculture Organization (FAO); Buckles D and Rusnak D(1999) "Cultivating Peace: Conflict and collaboration in Natural Resource Management" IDRC/World Bank 1999 p. 3 & 4.

²⁷⁴ Kenya National Bureau of Statistics (2016). Kenya Household and Economic Survey Report, Government Printer, Nairobi, Kenya

It is important to join international cooperation, since pollution is an international issue happening all around the globe, not endemic in a particular nation.²⁷⁵ At the point when taken into global thought, environmental insurance is completely assessed in its different perspectives. In this way, while opening the economy, Kuresoi and Kenya generally, aside from attracting remote venture to quicken development rate, must invest quality energy considering on environmental issue presented to new monetary environment.²⁷⁶ It must keep any unpropitious outcomes, and additionally not to miss brilliant chance to enhance its harmed natural surroundings.

Clearly, environment is clearly identified with each individual's life, so environmental assurance is the commitment and obligation of all, not one.²⁷⁷ Growing public mindfulness is not a straightforward mission; infact, it must be completed carefully keeping in mind the end goal to create an impact. As to this, Kenya can take in significant lessons from successful countries, for example, The United States. Its accomplishment in environmental awareness battles is impressive when campaigns are focused on precisely to particular groups or populations.²⁷⁸ A few people appear not to give careful consideration to environmental issues since they don't see how these issues would influence them or their way of life.

²⁷⁵ Kapteijns L. (2013). *Women and the Crisis of Communal Identity: the Cultural Construction of gender in Kenya History*, African Studies Centre Working Papers, Boston University, Boston.

²⁷⁶ Omondi, L. (2015). Migration and Environmental Hazards. *Population and Environment*, 26:273-302

²⁷⁷ Fratkin E. (2015). Resurgence of Inter-Pastoralist Warfare in Kenya. Paper presented to Panel *Resurgence of Ethnic Conflict and Tribalism in Africa*, American Anthropological Association Annual Meetings, Atlanta GA, Dec. 1, 2015

²⁷⁸ Ochieng B. & Maina, T. (2012), *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees*, in Harvard Environmental Law Review, Vol. 33, pp. 349 – 403.

4.3 Other Emerging Issues

4.3.1 Environmental Justice and Empowerment

Natural resources have an important role in activating and maintaining conflicts.²⁷⁹ The Constitution of Kenya 2010 perceives the environment as the legacy of the general population of Kenya and it calls for environmental insurance for the advantage of present and future years through authoritative and different measures, especially those considered in Article 69 thereof.²⁸⁰ Article 69(1) requires the State to inter alia: guarantee reasonable abuse, usage, administration and preservation of the environment and natural resources, and guarantee the evenhanded sharing of the collecting benefits; secure and improve licensed innovation in, and indigenous information of, biodiversity and the hereditary resources of the groups; and empower open interest in the administration, assurance and protection of the environment.²⁸¹

These arrangements are gone for accomplishing environmental justice for the Kenyan individuals.²⁸² Extensively characterized, environmental justice involves the privilege to approach natural resources; not to experience the ill effects of environmental strategies, laws and controls; and the privilege to environmental information, support and contribution

²⁷⁹ UNSO (2016). *Drought Preparedness and Mitigation in Sub-Saharan Africa*. New York: United Nations Office to Combat Desertification and Drought.

²⁸⁰ Republic of Kenya (2016). *Development Policy for the Arid and Semi-Arid Lands (Asal)*. Nairobi: Government Printer, Kenya

²⁸¹ Kimani, A. (2015). *Environmental Degradation and High Fertility in Sub-Saharan Africa*. Morrison.

²⁸² Mwanje, K. (2011). The Dependence of Drought Intensity on Climate. *Nature*, 326:483-485.

in basic leadership. ²⁸³It has been recommended that if basic leadership in regards to utilization of local resources is claimed at the nearby level, it can conceivably even out use or power and therefore asset sharing balanced which would thus advance poverty diminishment. Enabling individuals is considered basic for accomplishing poverty annihilation through making them mindful of their rights and qualifications, outfitted with abilities to settle on reliable decisions and negotiate(emphasis our own) for their rights and approach resources for their improvement. Increasing the nearby individuals' entrance to resources is valuable in expanding their control over those resources. The component of control in strengthening is utilized to allude to cooperation in aggregate procedures and is the viability or impression of the capacity to impact choices, prepare resources and take care of issues, constructing a powerful individual and gathering support. ²⁸⁴

Control empowers the investment procedure to be progressive and reasonable to individuals' basic mindfulness which suggests a redistribution of energy, so the procedure can be significant and genuine, and support can help a strengthening procedure. ²⁸⁵ This accompanies expanded financial strengthening which thus influences numerous territories. Enhanced correspondence and stream of information among groups enable them to acquire control over the financial resources and they add to the improvement motivation in their areas. The final product of the usage of the components of environmental justice would be

²⁸³ Gitari, Beatrice Njeri. 2015. "Environmental conflict and national security in Kenya: Case study of Turkana community." University of Nairobi , Nairobi.

²⁸⁴ Karanja P. (2014). Cattle, Khat, and Guns: Trade, Conflict, and Security on northern Kenya's Highland-Lowland Interface. A Case Study, A paper prepared for the USAID Conference *on Conflict Resolution in the Great Horn of Africa*, June 2014, draft.

²⁸⁵ Okwiri, J. (2013). Environment, population growth and productivity in Kenya: A case study of the Machakos District. *Development Policy Review* 10:359-387.

strengthening of individuals to empower them use the resources available to them to improve their lives.²⁸⁶

4.3.2 Legal and Institutional Framework for Environmental Conflicts Management

In case a person's right to a clean environment are violated or unrecognized, the constitution of Kenya under Article 70 indicates that that individual has a right to go to court for compensation.²⁸⁷ The court acts as a medium of conflict resolution. Article 162 requires that the parliament creates a court as high as the High Court that will deal with environmental uses and occupations, environmental conflicts and land titles. This is to associate the court of land and the High Court. TJS in Kenya is known as a mechanism to manage conflicts. Specific principles in the present judiciary guide the courts and tribunals according to Article 159 (2) (c).²⁸⁸

One of these standards is that of option types of question determination including compromise, intercession, assertion and conventional debate determination instruments might be advanced given that they don't contradict the Bill of Rights they are not hostile to justice and ethical quality or result to results that are disgusting to justice or profound quality and incase that they are not conflicting with the constitution or any law.²⁸⁹ In

²⁸⁶ Krueger, H. (2015). Economic Growth and the Environment, *Quarterly Journal of Economics* 110(2): 353-377.

²⁸⁷ Ahmed, A. (2011). Urbanisation and the Challenges of development. *Journal of sustainable development in Africa* 13, (7) 210 -235

²⁸⁸ Okada, K. & Samreth, S. (2014). *Empirical Study on Environmental Kuznets Curve for CO2 in France: the Role of Nuclear Energy*. *Energy Policy*, 38, 4057-4063.

²⁸⁹ Federal environmental Agency Act (2012) Cap. F. 10. *Laws of the federation of Nigeria*. International Union for the Conservation of Nature (IUCN), 1980. *World conservation strategy Living resource conservation for sustainable development*.

article 162(2)(b) of the constitution, it gives details on how a better court has been put to place so as to listen and provide ruling on issues involving the use of the environment and the control of its powers and purposes according to the Environmental and Land Court Act.²⁹⁰

In The Act in Section 20 says that the court cannot preclude the Act from adopting and implementing, the agreement of the party, and any other means of dispute resolution, mediation and traditional ways of resolving disputes that are in line with article 159(2) (c) of the Constitution.²⁹¹ The court is also obligated to stay proceedings where ADR mechanism is a condition precedent to any proceedings before the court until the condition is fulfilled. Environmental Management and Coordination Act also guarantee the right to a clean and healthy environment. Section 3 provides that should that right be infringed upon then the person can apply to the high court for redress. The Land Disputes Tribunal Act is another law that created the land disputes tribunal though now it is repealed.²⁹² The Land Control Act creates the provincial and central land appeals boards which are statutory tribunals of dispute resolution and the recently established Environment and Land Court.

Under the institutional framework, the Environmental Management and Coordination Act also establish other quasi-judicial mechanisms such as the National Environment Management 23 Article 159 (2) (c) of the Constitution of Kenya 2010, Government Printer,

²⁹⁰ Inyang, F. & Eleje, J. (2012). Poverty, Environmental Degradation and Sustainable Development: A discourse". *Global Journal of Human social science, sociology, economics and Political science*.

²⁹¹ United Nation conference, (2015). Declaration of the UN Conference on the human environment.

²⁹² Wilson, J. (2012). Reexamining the Empirical Evidence for an Environmental Kuznets Curve, *Review of Economics and Statistics* 83: 541-551.

Nairobi Act Number 19 of 2011, Environment and Land Court Act, N0.19 of 2011 Section 20(2) 27 Established under the now repealed Land Disputes Tribunals Act 1990 28 Cap 302 Laws of Kenya, Established under the Environment and Land Court Act, Act No. 19 of 2011 Authority (NEMA), National Environmental Tribunal (NET) and Public Complaints Committee (PCC).²⁹³

The 2011 Environment and Land Court Act repealed the Land Disputes Tribunal Act of 1990; this resulted in extinction of land disputes tribunals that had provided adjudication mechanisms over land disputes since 1990.²⁹⁴ Since these tribunals were responsible for adjudication over environmental conflicts arising from land, they form bedrock of the jurisprudence that this research is investigating. In the next section the research analyses land disputes tribunals specifically to determine how they intersected with the traditional justice mechanisms, why they did not work and to glean out lessons pertinent to developing another framework.²⁹⁵

4.4 Chapter Summary

This chapter have reviewed some mechanism aimed at managing environmental conflict. There are a number of frameworks and policies identified, the mentioned mechanisms above are very familiar. The government has involved both economic and social

²⁹³ Ahmed, A. (2011). Urbanisation and the Challenges of development. *Journal of sustainable development in Africa* 13, (7) 210 -235

²⁹⁴ Opschoor, K. (2014). Economic Growth and Emissions: Reconsidering the Empirical Basis of Environmental Kuznets Curves, *Ecological Economics* 25: 161-175

²⁹⁵ Kamande, W. (2014). Environmental Conservation as an Engine for Economic Growth: *Testing the Validity of Environmental Kuznets Curve on Carbon Emissions for Kenya*. Unpublished MA Thesis, University of Dares Salaam.

mechanisms so as to effectively solve the environmental conflict but the implementation still remains partial. So as to effectively acquire the ecology and solve the problem of environmental conflicts, a lot of effort is required. To attain a long term environmental target, all authorities need to come together in policy making, implementation and also the supervision of progress that eventually results in sustainable socio- economic development. The next chapter will conclude the study and give the appropriate recommendations.

CHAPTER FIVE

CONCLUSION

5.1 Key Findings

The study found that poverty is an all-round issue that includes social, political and cultural factors that are beyond financial needs.²⁹⁶ Researchers have been attempting to build up a hypothetical way to deal with poverty and conflict for a long time. Greater part of the interviewees concurred that poverty because of absence of human needs prompt responses that outcome in conflict. The human needs theory championed by Parvin and Shaw contends that there are conflict and worry in developing nations since individuals are denied their natural needs, as well as mental requirements that are associated with growth.²⁹⁷ The main focus of this theory is the fundamental requirements (for example, food, water, shelter and clothing) not at all like intrigue can't be exchanged, smothered, or expected; accordingly any efforts to do this, results to conflict.

The study found that Kenya's economic development is escalated by high levels poverty unemployment, low agriculture productivity, and an increasing dependency ratio which are some of the major contributing factors to poverty in the county.²⁹⁸ Other causes of poverty include poor marketing linkages for agricultural products, lack of affordable credit

²⁹⁶ Okwiri, J. (2013). Environment, population growth and productivity in Kenya: A case study of the Machakos District. *Development Policy Review* 10:359-387.

²⁹⁷ Karanja P. (2014). Cattle, Khat, and Guns: Trade, Conflict, and Security on northern Kenya's Highland-Lowland Interface. A Case Study, A paper prepared for the USAID Conference on *Conflict Resolution in the Great Horn of Africa*, June 2014, draft.

²⁹⁸ Ochieng B. & Maina, T. (2012), *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees*, in *Harvard Environmental Law Review*, Vol. 33, pp. 349 – 403.

facilities for farmers and high costs of farm inputs. There is need to initiate programmes that reverse these trends with the aim of improving the living standards of the County's residents. The programmes should work towards promoting investments, use of modern techniques and practices in agriculture and acquisition of appropriate skills.²⁹⁹

The study found that cultivation of farm products was greatly affected by the violence due to some factors. Markets were also disrupted for the farm products. Normally the Muchorwe, Turi, Mukinyai and Keringet provided a great pool of customers on market days but this was disrupted by the post-election violence.³⁰⁰ Due to lack and limited markets for their products, most of the farmers abandoned farming. The areas greatly occupied by the Agikuyu and the Abagusii which were Molo and Elburgon were no longer safe for the Kipsigis to bring their livestock especially the mursic (fermented milk) and sotet (gourds) to the markets. This also led to loss of income for majority of the victims and they had to greatly depend on other family members and well-wishers. Those who moved to Molo made the dependency rate to increase.

Consequently, dwellers of Kuresoi have no choice but to depend on other family members who were employed so as to acquire basic needs, medical and schools fees for their children. These kind of unplanned expenses strained the one who provided greatly.³⁰¹ Due to the deprivation of many off their honest way of income, crime came to rise.³⁰² This has

²⁹⁹ FAO (2010), 'Global Forest Resources Assessment 2010, Forestry Papers, 140, Food and Agriculture Organization of the United Nations, Rome

³⁰⁰ Simonse S. & Kurimoto, G. (2014). Conflict, Age and Power in Northern East Africa. Oxford University.

³⁰¹ Laplante, H. (2012). Confronting the Environmental Kuznets Curve. *Journal of Economic Perspective*, 16(1): 147-168

³⁰² Shafik, N. & Bandyopadhyay, S. (2012), Economic Growth and Environmental Quality: Time series and Cross Sectional Evidence. *Background paper for World Development Report*, World Bank, Washington D.C.

greatly affected the areas that the internally displaced moved to. These areas were Amalo, Kapsimbweywo, Kiptagich, Tinet, Kiptororo and Nyota where crime increased compared to before the 1992 clashes. There has been increase in violent robberies. Since 1992, according to a police officer in Molo, petty theft has increased greatly.³⁰³

The study concludes that the root causes of environmental conflicts in Kuresoi sub-county is as a result of scarce natural resources that include water, pastures and arable land for farming. If one community feels the other is benefiting more then they tend to push them off so that they can share or take control of what they have.

The study has found that there has been negative effects of environmental conflict on the socio-economic developments in Kuresoi sub county Kenya. The much affected are social amenities that include education and health sector. Children education has been affected as it is evident from the respondents that their grades where below other counties within the conflict period. Besides health care has been affected resulting malnutrition and traveling long distances to access health care.

The study has found that there are mechanism that can resolve the conflict experienced in Kuresoi sub- county Kenya. Government involvement in peace building initiative is the key main suggested factor. Other include capacity building, involvement in peace building galas and spiritual leaders addressing the vice by showing how important human life and property should be respected.

³⁰³ Fogel, R. (2014). *The Escape from Hunger and Premature Death, 1700-2100: Europe, America, and the Third World*. 4th ed. Cambridge: Cambridge University Press.

5.2 Recommendations

There is need to create an enabling environment for creation of opportunities through; provision and maintenance of essential infrastructure, investment in human development and basic welfare; and where necessary guarding against human exploitation and environmental conflict.

Currently, Kuresoi has a weak mechanism for collecting information on climate change, with an unconsolidated and departments tailored at enhancing the fight against climate change. This fragmented framework makes it difficult for key stakeholders to track progress, share results and access information. Therefore, the government, higher learning institutions and climate sensitive institutions should enhance a holistic and adequate resourced monitoring system aimed at enhancing a free flow of information through research based initiatives.

This study concentrated on evaluation of the impact of environmental conflict on socio-economic development. Even though the study has achieved its objectives, there's need to investigate the nature of the relationship between economic growth and other environmental variables such as water pollutants, noise and gaseous emissions.

The study recommends that there is need to ensure conservation of the environment to avoid the witnessed conflicts in Kuresoi. The Kenyan government as well as the county governments should ensure they engage communities dwelling in conflict areas in search of lasting solutions. There is need to ensure security has be beefed up where conflict hot spots have been identified.

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APPENDICES

Appendix I: Interview Guide

- 1) Briefly discuss the contribution of environmental conflict in Kenya to Kuresoi on environmental conflict and how this impacts on socio-economic development in the area?

- 2) Briefly highlight an overview of environmental conflict situation in Kuresoi?

- 3) What contributes to environmental conflict in Kuresoi as given below?
 - a) Unreliable Climate

 - b) Extinction of Animal and Plant

 - c) Land Degradation

 - d) Insecurity as a Result of Competition for Scarce Resources

 - e) Poverty

- 4) Discuss any other issues that have not been addressed above on environmental conflict and how this impacts on socio-economic development in Kuresoi Sub County

- 5) Suggest ways of improving the current situation of environmental conflict in order to boost socio-economic development in Kuresoi Sub County

THANK YOU FOR YOUR TIME AND PARTICIPATION