EMERGING SOCIO-ECONOMIC CHANGES ON TURKANA COMMUNITY`S NOMADIC LIVELIHOOD

BY

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DECLARATION

DECLARATION BY STUDENT

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DEDICATION

This work is dedicated first to the Lord and my beloved wife Agnes Akunoit, parents Loobar and Lemuya , Children, Lokuwam, Ayomo, Lokwawi, Nakutan, & Murimi, my foster children, Ekiru, Ekunoit, Ngikwa & Ewalan, brothers Lowoi, Lobolia, Komol, Erupe, Puluk and sisters Lokuwam, Lopuu and Lopongo for your support and encouragement during the period of my research.

May the almighty God bless you all.

ABSTRACT

According to the United Nations news agency, Turkana Pastoralist Community had experienced malnutrition rates of up to 37.4 percent; the highest recorded in 20 years and more than double the U.N. World Health Organization emergency threshold of 15 percent. This report showed that the future of pastoral communities is uncertain if nothing is done due to recurrent drought and famine in Sub-Saharan Africa. With the emerging socio economic changes coupled with harsh climatic conditions, the future of Pastoralism as a source of livelihood will be uncertain. The pace at which these changes are occurring has tended to vary from one region to another; most communities are today working for other means for survival for their livelihoods. Reliance on the Pastoralism for livelihood per se is no longer practical. This study therefore sought to examine the emerging socio- economic changes on Turkana community's nomadic livelihoods. The study applied Emile Durkheim theory of Modernization which emphasizes two types of societies, the traditional and the modern in relation to social change. The study objective were to examine the socio economic changes taking place among the Turkana pastoralists, to assess the effects of the changes on the Turkana community`s livelihoods and to explore appropriate ways of coping up with the emerging changes cutting across the region. The study was carried out in Turkana Central district in Turkana County. Given the nature of the area, the study used descriptive design and on stratified random sampling method to generate information. Data was collected using questionnaires, interviews, examination of records, observation and focused group discussion. Both qualitative and quantitative techniques were used in determining sample size. Arising from the study findings, numerous socio economic changes were identified ranging from desertification, urbanization, insecurity to high cost of living taking place in Turkana. Most of these changes had impacted on the community in various ways as stated elsewhere in the document. In conclusion, Turkana community as any other community under Pastoralism will have to adopt new changes for survival although Pastoralism still remains as a key source of their livelihood.

TABLE OF CONTENTS

DECLARATION....2

DEDICATION....3

ABSTRACT....4

TABLE OF CONTENTS....5

ACKNOWLEDGEMENT....10

DEFINITION OF KEY TERMS....11

LIST OF FIGURES....12

ACRONYMS AND ABBREVIATIONS....14

CHAPTER ONE: INTRODUCTION....1

1.1 Overview....1

1.2 Background of the Study....1

1.2.1 Emerging Socio Economic Changes.....3

1.2.2 Turkana Pastoralists and socio economic change....6

1.4 Objectives of the Study.....8

1.5. Specific Objectives....8

1.6. Research Questions....9

1.8 Justification of the Study....9

1.9 Significance of the Study....9

1.10 Limitation of the Study.....10

CHAPTER TWO 15

LITERATURE REVIEW 15

2.1 Overview 15

2.2 Concept of Pastoralism 15

2.3.1 The Kyrgyz Pastoralist of the Soviet Union 18

2.3.2 The Sogotra Archipelago of Yemen 19

2.3.3 The Tuareg Pastoralists of Niger 20

2.3.4 Bedouin Pastoralist Community of the Kingdom of Saudi Arabia 21

2.3.4.1 The Evolution of the Saudi Welfare State. 21

2.3.4.2 The Elimination of Trans-Border Migration 22

2.3.4.3 Large-Scale Labor Importation 23

2.3.4.4 Subsidized Barley Supplements 23

2.3.4.5 Land Tenure and the Nationalization of Rangelands 23

2.3.4.6 Trucks, Roads and Water 24

2.4 The Samburu Pastoralists of Kenya 24

2.5 The Maasai Pastoralists of East Africa 24

2.5.1 Changing way of Life 25

2.5.2 Entrepreneurship. 26

2.5.3. Property Ownership 27

2.6 Physical features and drainage system of Turkana Central district 28

2.6.1 Wind. 29

2.6.2. Lake Turkana Wind power Project 31

2.6.3. Temperature 31

2.6.4 Evaporation 31

2.6.5 Rainfall. 32

2.6.6 Natural capital. 32

2.6.7. Fishing Industry in Lake Turkana 33

2.6.8. Oil Drilling In Turkana County 33

2.7 Summary of Literature Review 34

CHAPTER THREE 37

RESEARCH METHODOLOGY 37

3.1 Overview 37

3.2 Scope of Study 37

3.4 Target population 39

3.5 Sampling Procedure. 39

3.5.1 Sampling Size Determination 40

3.6. Data Collection Instruments 41

3.6.1 Questionnaires and interview schedules 41

3.6.2 Type of Data 42

3.6.3 Data Collection procedure. 42

3.6.4 Validity of Research Instruments. 43

3.6.5 Reliability of the Research Instruments 43

3.7 Data Analysis and Presentation. 44

3.8. Ethical Consideration 44

CHAPTER FOUR 45

DATA PRESENTATION , ANALYSIS AND INTERPRETATION 45

4.1 Overview 45

4.2 Data Presentation 45

4.2.2.Dangers emanating from socio economic changes taking place in Turkana central district.47

4.2.3 How are the Turkana Community locals sustaining themselves from socio economic changes 47

4.2.4 How the Turkana Nomadic community are coping with the socio economic changes. 48

4.2.6 Respondents Occupation 50

4.2.7 Interlink between the respondent`s occupation and the emerging socio economic change.51

4.2.8 Respondents Age.....52

4.2.9 Marital Status 54

4.2.10 Impact of socio economic changes. 55

4.2.11 Strength and Opportunities in Turkana Central district.....56

4.3 Synthesis of the Findings 57

4.3.1 Objective One: The Socio Economic Changes taking place in the region 58

4.3.2 Objective Two: Assessing the Impact of Socio Economic changes 63

4.3.3 Objective Three: Coping Strategy by the Turkana Pastoralists. 65

4.3.3.2 Embracing diversity in sustainable livelihoods. 68

4.3.3.3 Investing in Education.....69

5.1 Summary 74

5.2 Conclusion.....74

5.3 Recommendations. 75

5.4 Suggestion for further studies.....77

REFERENCES.....77

APPENDICES.....79

APENDIX I : QUESTIONNAIRE FOR PASTORALISTS 79

APPENDIX II : QUESTIONNAIRE FOR KEY INFORMANTS 82

APPENDIX III : RESEARCH AUTHORIZATION 85

APPENDIX IV : RESEARCH PERMIT 86

APPENDIX V : LETTER OF AUTHORRIZATION FROM DISTRICT COMMISSIONER 88

APPENDIX VI : LETTER OF RECOMMENDATION FROM UNIVERSITY 90

APPENDIX VII : LETTER OF AUTHORITY FROM DISTRICT EDUCATION OFFICER.....90

APPENDIX VIII: SUPERVISORS AT NAKABARAN WATER POINT IN LODWAR 92

APPENDIX IX: RELIEF FOOD DISTRIBUTION AT NADIPOE VILLAGE 93

APPENDIX X: MR JOSHUA LEMUYA CONDUCTING FOCUSED GROUP DISCUSSION 94

APPENDIX XI : MY SUPERVISOR (PROF MULONGO) AT A CURIO IN LODWAR 95

APPENDIX X11: TIME PLAN 97

APPENDIX XIII : BUDGET 98

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DEFINITION OF KEY TERMS

Nomadism : Movement from one place to another in search of grass and water for animals.

Pastoralism: is a subsistence practice in which people care for and domesticate animals, such as camels, donkeys, cattle, reindeer, sheep, and goats.

Socio-Economic: Describes the nature of interactions between people, or the relationship between people in relation to monetary, technology, business, education Interactions in a given group, community or organization.

Livelihood: This is a traditional way of living dependent on the traditional structures.

LIST OF FIGURES

Figure 1.1 Community Elders at Kaikir Village…… 8

Figure 1.2 Relief food distribution by a local CBO…...…… 8

Figure 2.3 Lake Turkana Wind Power Project…… 21

Figure 2.4 Oil Rig at Ngamia one at Nakukulas, Turkana South……. 24

Figure 3.5 A Map of Turkana Central district…….…… 27

Figure 4.6 Social economic changes taking place in the area……..… 34

Figure 4.7 Dangers emanating from socio economic changes taking place … 35

Figure 4.8 Respondents Occupation…….……...… 39

Figure 4.9 Respondents Marital Status……..…… 42

Figure 4.10 Strength and opportunities in Turkana Central……. 44

Figure 4.11 Bodaboda transport has created job opportunity for the youth … 46

Figure 4.12 illegal burning and selling of charcoal for livelihood poses environment hazard.…… 47

Figure 4.13 Firewood vendor struggles to cope up with the odds of socio-economic change..……..... 48

Figure 4.14 Quarry stones at Nasiger village as a way of creating sustainable development…..... 49

Figure 4.15 Bishop Onganya and Prof. Mulongo at Lodwar - Juba Highway…….. 50

Figure 4.16 Women involving in small business to support their livelihoods…. 50

Figure 4.17 Turkana women buying brooms from the locals…….. 53

Figure 4.18 Weaving and basket Industry in Nayuu village.…….…….. 55

LIST OF TABLES

Table 3.1 Distribution of Respondent's..……..…….…….…….. 28

Table 3.2 Turkana Central District Population……. 29

Table 4.3 How the Turkana Nomadic Community are sustaining themselves….. 36

Table 4.4 How the Turkana Community is coping with Socio economic changes.. 37

Table 4.5 Respondent's level of Education…….……...……..…….. 38

Table 4.6 Occupation and emerging Socio Economic change…… 40

Table 4.7 Respondent's Age…….. 41

Table 4.8 Impact of Socio Economic change …… 43

Table 4.9 Coping strategy by the Turkana Pastoralists……. 50

ACRONYMS AND ABBREVIATIONS

ASAL- Arid and Semi-Arid Lands

BMU – Beach Management Unit

CBO – Community Based Organization

CCT – County Council of Turkana

CDF – Constituency Development Fund

DOL – Diocese of Lodwar

EU – European Union.

GOK – Government of Kenya

IEBC – Independent Electoral and Boundaries Commission

ICT – Information Communications Technology

IOM – International Organization of Immigration

LAPSSET – Lamu-Port Southern Sudan-Ethiopia Transport

LTWP – Lake Turkana Wind Power

MDG- Millennium Development Goals

SPSS- Statistical Package for Social Scientist

SWOT- Strength Weakness Opportunity Threat

UN – United Nations

UNDP – United National Development Programme

USADF - United States of American Foundation

CHAPTER ONE: INTRODUCTION

1.1 Overview

This chapter lays the foundation which serves as the bench mark for the entire research. The chapter discusses the background of the study, statement of the problem, objectives of the study, research questions, hypothesis, justification of the study, scope of the study and theoretical framework. The significance of this chapter is that it points out some problems which need to be addressed by the way of a study.

1.2 Background of the Study

Pastoralism as an activity is part and parcel of many communities all over the world. There are an estimated 30-40 million nomads in the world. Semi nomadic pastoralists and pastoral nomads form a significant but declining minority in such countries as Saudi Arabia (probably less than 3%), Iran (4%), and Afghanistan (at most 10%). They comprise less than 2% of the population in the countries of North Africa except Libya and Mauritania (Philips, 2001).

Pastoralist communities in the Sub-Saharan Africa comprise of one-half of the world`s pastoral people (Flatklin 2001). These pastoral communities live in the marginal areas of the continent which is exposed to variable rainfall pattern with diversified soil character resulting in low resource base characterized by unpredictable levels of forage

productivity. This environment offers limited opportunities for subsistence activities apart from keeping of livestock.

Pastoralists are masters in the art of engaging with uncertainty and turning it to their own advantage, since unpredictability is characteristic of the ecological environments in which they operate, (Cavanna and Abkula, 2009); This statement tells one that; pastoralists are risk takers and adventurers according to the nature of their livelihoods. This philosophy has molded them to adapt in range management. Nomadic pastoralism was historically widespread throughout less fertile regions of Earth. It is found in areas of low rainfall such as the Arabian Peninsula inhabited by Bedouins and Northeast Africa inhabited by Somalis. Nomadic transhumance is also common in areas of harsh climate, such as Northern Europe and Russia inhabited by the indigenous Sami people, Nenets people and Chukchis among others, (Stammler, 2007).

The Mongols in what is now Mongolia, Russia and China, and the Tatars or Turkic people of Eastern Europe and Central Asia were nomadic people who practiced nomadic transhumance on harsh Asian steppes. Some remnants of these populations are nomadic to this day. In Mongolia, about 40% of the population continues to live in traditional nomadic lifestyle. But due to the effect of modernization, they are no longer leading a Pastoralism life style but only a handful.

The nomadic Sami people, an indigenous people of northern Finland, Sweden, Norway, and the Kola Peninsula of Russia, practice a form of nomadic transhumance based on

reindeer. In the 14th and 15th century, when reindeer population was sufficiently reduced that Sami could not subsist on hunting alone, some Sami, organized along family lines, became reindeer herders. Each family has traditional territories on which they herd, arriving at roughly the same time each season. Only a small fraction of Sami have subsisted on reindeer herding over the past century; as the most colorful part of the population, they are well known. But as elsewhere in Europe, transhumance is dying out.

The Turkana Pastoralists raise domestic animals including cattle, camels, goats, sheep and donkeys, which are used for milk, meat, blood, transport and trade. Despite environmental challenges, Turkana Community as one of the African pastoralists Communities practices a relatively resilient and ecologically sound mode of production during the Pre-colonial times (Bovin and Manger 1990). Pastoralists were able to cope with ecological and modern stresses by different strategies within their social networks, for example, diversification of activities, dispersion of animal and human groups, and forms of redistribution and reciprocity (Davies 1996).

1.2.1 Emerging Socio Economic Changes.

Governments are geared towards settling their nomadic populations while others are allowing them to move around places in search of pasture for their livestock due to the diminishing land space. This sends signals to the pastoral communities to prepare living a sedentary livelihood as big ranches are shrinking. In Sudan, the government designed and implemented programmes to settle nomads and thus exposed them to urban centers. **(**Babiker 2007)As a result, nomadic people became more vulnerable to the dictates of the

market environment. Technology has drastically changed. The way things were done in the 20th Century is not the way things are now done in the 21st Century and definitely will not be the same in the 22nd Century. This depicts that Socio Economic change is not static, it is dynamic. With the emerging changes the Nomadic Pastoralists will have to adopt coping strategies on the modernization trends.

The Climatic conditions today are not the same as in the 20th Century. Due to the effects of global warming, the weather pattern and seasons have drastically changed such that the migratory patterns and the livelihoods of the Nomadic Communities have changed due to recurrent drought and famine. The Nomadic Communities are expected to seek other means as a survival strategy. For those ones living near Lake Turkana and along River Turkwel are practicing fishing industry and peasant farming respectively.

Due to high population that exerts pressure on the diminishing and scarce nonrenewable resources like Land, the Nomadic Communities are encouraged to settle and diversify their livelihoods other than entirely depending on Pastoralism farming which is not sustaining the Pastoral economies. With the emergency of urban centers and towns, Industrialization is almost felt everywhere, the Pastoralists should be prepared to appreciate the activities of modernization as it creates money economy replacing their legendary barter trade. Employment is available in the urban center which earns one a salary or wages for that matter. This has become a trap for the young herders, they have ran away from herding livestock and go to towns looking for simple jobs like working in hotels, being watchmen among other lowly paid jobs.

Socio economic change is accompanied with technology which is key to efficiency. With the introduction of mobile phones, life has become so easy as one can perform a lot of work within a short time. Some Nomadic Communities are using mobile phones in communicating to other pastoralists about status of grass and water for their animals, insecurity threats among other uses.

In the 21st century, it is evident that education has enlightened pastoralist communities in the world. For example in Turkana pastoralist community the girl child was regarded as a source of wealth because her parents receives dowry before marriage. This belief is changing because for one, there is children's rights protection by the government and the civil society's for example a child has a right to Education. The Turkana Pastoralists are not rich as they used to be in the 20th Century. The amount of livestock to be paid today during marriage is just a handful compared to hundreds of cows and camels they used to during those days. This issue was caused by climatic change that has altered the seasonal patterns.

Social Interaction has also been an avenue for the changes that has emerged, for example some communities are interacting freely with other communities in social places like Hospitals, schools, public meetings contrary to the traditional time where one tribe used to own and occupy an area as one community speaking one language without external forces

1.2.2 Turkana Pastoralists and socio economic change

It is evident that Pastoralism is becoming less and less profitable for the people of Turkana Community as droughts and diseases take their toll on livestock." (Daily Nation, Thursday April 28, 2011) Pastoralism is a hard job, there is a lot of man hours invested in this daily career but less is gotten back in terms of economic status. The Turkana pastoralists are not getting the value of the hours they put in this career on a daily basis. Some of them have resorted to do business so as to supplement their Nomadic livelihoods. Turkana region has been described as "an inhospitable environment where drought and famine…recur with regular frequency" (McCabe and Ellis 1987) this explains the reason why this Pastoralist Community are gradually shifting from their nomadic lifestyle to modern life style. Even though McCabe and Ellis say that Turkana region is an in hospital environment, I think this is a fallacy, basically because, Turkana region`s environment is suitable to their nature of life, i.e. Pastoralism.

Following the 1980-1981 drought, the Kenya Government, assisted by donor agencies, took the initiative of seeking alternatives for those people who were no longer able to survive as pastoralists. The alternatives included development of fisheries, resettlement on irrigation schemes and restocking (Hogg 1986). This alternative proved not viable, because by then these IDP camps were only possible to hold and sustain the elderly and the disabled, but the energetic people had an option to seek redress from the modern ways

of living. Up to now IDP camps are still in Turkana which was instigated by the recent post-election violence in 2007.

Throughout the arid regions of Africa formerly mobile pastoral populations are becoming sedentary, although pastoral sedentarization is encouraged by international development agencies and national governments as solutions to food insecurity, poor health care, and problems of governance, it has not been demonstrated that abandoning the pastoral way of life, "is beneficial to the health and well-being of pastoral populations." (Galvin, 1990).The Turkana community being one of the pastoralists Community in Africa has not been exempted by the effects of Socio Economic changes. They are moving away from their pastoral life style towards a sedentary life style which is depicted by their settlements in the urban centers, along Lake Turkana and River Turkwel respectively.

According to Sue Cavanna et al (2009), the main drivers of socio economic change in the African pastoralist setting has been drought, security, desire for education, settlement pressure on land and ICT. This is true because currently, Pastoralists see themselves as agents of change rather than as passive recipients of external decisions. The pastoralist communities are able to explain the changes which are influencing their lives now, the changes influencing their causes and also can tell the possible outcomes.

1.3 Statement of the Problem.

Turkana Nomadic Community has undergone several changes in their way of livelihoods. For example their migratory seasonal calendars have changed. The rain season in the

region has also changed. For example they used to get rain in the months of March to April and also get short rain in the month of September to October by this has changed drastically. Sometimes it will not rain for a long period like a year or so. Cases of death(s) due to malnutrition and also death of livestock due to diseases and lack of forage and water making them vulnerable to hunger and famine leaves everyone perturbed.

This study therefore sought to analyze the effects of emerging socio economic changes on the Turkana community`s nomadic livelihood.

1.4 Objectives of the Study.

The main objective of this study was to examine the effect of emerging socio economic changes on the Turkana community`s nomadic livelihood.

1.5. Specific Objectives

i. To examine the socio economic changes taking place in Turkana region.

ii. To assess the effects of the socio-economic changes on the Turkana community`s nomadic livelihoods.

iii. To find out how the Turkana Community are coping with the trends of socio economic changes.

iv. To explore appropriate ways of coping with the emerging socio economic changes cutting across the entire region.

1.6. Research Questions

i. What are the socio economic changes happening in the Turkana Community`s nomadic livelihood?

ii. How have these socio-economic changes impacted on the Turkana Community?

iii. What challenges have been associated with these changes?

iv. How are the Turkana Pastoralists coping with these changes?

1.8 Justification of the Study

A wave of socio economic change is cutting across the world, governments and non-governmental organizations have put measures and structures for the realignment process in their day to day operations. Little has been done to evaluate how the pastoralist communities are grappling with the emerging socio economic changes that are shaking their status quo. This gap therefore justified the need for this study.

1.9 Significance of the Study

The significance of this study is to enhance a proactive pastoralist community in terms of culture, traditions and socio economic change. It also enlightens the pastoralist communities in developing coping strategies to counteract these changes. Pastoralists have always lived with change, but the current pace and scale of change is unprecedented, therefore this study is significant in all facets.

The findings enhanced an informed pastoralist community in terms of what is happening around them and hence well prepared.

It spurred the pastoralist communities to take advantage of emerging opportunities for their social and economic growth and also the findings provided information to the community, stakeholders and the government for policy formulations.

1.10 Limitation of the Study.

Due to the nomadic lifestyle of this community, it was not going to be easy to collect information from them, however, with the help of their migratory calendar, it was easy for the researcher to follow and locate them without interrupting their activities.

Because of the lifestyle of this community, it was not easy to get them gathered in one place unless the area chief or the assistant chief or any leader of the chief`s council known as " *Mukasa`s*" is present in that meeting. The researcher had to use these local administrative structures to administer the data collection tools.

As illustrated in the figure 1.1, during food distribution occasion, it was east to administer questionnaires and conduct Focused Group Discussions. The people assembled themselves in different tree shades in terms of villages where they come from. This made the sampling procedure easy for the researcher during the study.



Figure 1.1: Community Elders at Kaikiri village supervising food distribution exercise.

Source: Researcher

Due to heat from scorching sun and shortage of food was eminent since it was on a dry season, it was not easy for the researcher to get the pastoralists for the interviews during the day, the researcher overcame this limitation by doing some interviews in the evening when they are at home.



Figure 1.2: Relief Food distribution taken to Nakwei group.

Source: Field Survey

Figure 1.2 above shows some people carrying a few bags of foodstuffs to their group. This was a day marked for relief food distribution. In a day like this, the community elders usually send word to all the people living in that locality. They all come to a water point or a marked common place where several other activities take place as well. It is here that the community receives instructions from the government through area Assistant chiefs and also where other information is disseminated.

During the study the researcher fitted into their time schedules with the elders and the local chief. The researcher also partnered with a local CBO which had an activity that day with the people. The interview schedule was also slotted in the program of the day. The elders and the local chiefs addressed the people and later on the researcher was given time to administer the questionnaires and also organized focused group discussion on the emerging socio-economic changes in their area.

After the whole activities of the day the local CBO distribute the Relief food as shown in the picture above. To overcome all these challenges, the researcher had to adjust the data collection methodology, where observation was also used where necessary to collect the data. The research assistants were conversant with the local language and this helped the researcher to collected useful information for the study. With the issue of not getting these people in their homes due to their nature of their nomadic livelihood, the researcher overcame this limitation by using their migratory calendar and also visiting them in their strategic places for example water points and their grazing field.

During the time of study, it was not easy to get information from the respondents or to interview people without prior permission from their local leaders, to overcame this barrier the researcher created a rapport with the local leaders and was able to accompany them to the local villages and the researcher was given chance to speak to people after the leaders have talked.

There are no formal schools nearby where the children can go and learn. The nearest school for example is in Loturerei Village which is 15 Kms away. These means children in this area are usually left at home to take care of their little ones and young goats at home. Most of the Pastoralist children are taught by church evangelists during their house to house evangelism.

1.11 Theoretical Framework

The study was based on Emile Durkheim's theory of 1858 on rapid social change and Modernization which argues that collective consciousness binds individuals together and creates social integration. He saw increasing population density as a key factor in the advent of modernity. As the number of people in a given area increase, so does the number of interactions and the society becomes more complex. From this statement, the same is happening with the nomadic communities, the more this community interacts with other communities the interactions becomes complex that it erodes ones cultural beliefs and values. Durkheim further said that as people engage in more economic activity with neighbors or distant traders, they begin to loosen the traditional bonds of family, religion, and moral solidarity that had previously ensured social integration and he worried that modernity might herald the disintegration of society. Durkheim highlighted that simpler societies are based on mechanical solidarity, in which self-sufficient people are connected to others by close personal ties and traditions. Modern societies are based on organic solidarity, in which people are connected by their reliance on others in the division of labor.

This theory was applicable to this study when it showed the relationship between simple societies and complex societies. This means when people come together from different areas and exerts pressure on a few resources available in the urban centers, this will raise demand of the few available commodities and the cost of living will be expensive due to the growth of population.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter focuses on literature which is significant to the research and conceptualization of the study. It highlights the Kyrgyz pastoralists of the Soviet Union, The Socotra Archipelago of Yemen, Tare pastoralist of North-Central Sahara; Bedouin Pastoralist of the Kingdom of Saudi Arabia, Samburu of Kenya, and the Maasai Pastoralist of Kenya. Sources of literature review were published and unpublished literature in libraries, resource centers, offices, internet, books, reports, journals, past studies and newspapers.

This chapter highlights how other pastoralist tribes in the world dealt with the emerging socio economic changes in their respective areas.

2.2 Concept of Pastoralism

Mobile Pastoralism is a major livelihood system in Africa, one of the few capable of making economic use of dry lands. Yet it has been subject to many misunderstandings, based on assumption that mobility is inherently archaic and Pastoralism economically irrational. As a result, policy towards Pastoralism has been essentially negative, driven by the conviction that mobile groups cannot benefit from services and that pastoralists are poor custodians of the land, contributing little to the national economy, (Cavanna, 2009).

Historically nomadic herder's lifestyles have led to warrior-based cultures that have made them fearsome enemies of the settled people. Tribal confederations built by charismatic nomadic leaders have sometimes held sway over huge areas as incipient state structures, whose stability is dependent upon the distribution of taxes, tribute and plunder taken from settled populations.

In the past it was asserted that Pastoral nomads left no presence archaeologically but this has now been challenged. Pastoral nomadic sites are identified based on their location outside the zone of agriculture, the absence of grains or grain-processing equipment, limited and characteristic architecture, a predominance of sheep and goat bones, and by ethnographic analogy to modern pastoral nomadic peoples. Juris Zahrins has proposed that pastoral nomadism began as a cultural lifestyle in the wake of the 6200 BC climatic crisis when Harifian hunters and gatherers fused with Agriculturalists to produce a nomadic lifestyle based on animal domestication developing a Circum Arabian nomadic pastoral complex, and spreading Proto-Semitic languages, (Cavanna,2009).

One theory asserts that Pastoralism followed mixed farming (rainfall-dependent agriculture with animal husbandry). A model presented by Bates and Lees suggests that it was the introduction of irrigation to farming which resulted in the selective pressures for specialization. The increased productivity of irrigation agriculture ultimately resulted in population growth and pressure on resources, which led to greater land and greater labor requirements for intensive farming. Marginal areas of land were often all that was left for animal rearing.

To acquire enough forage, large distances had to be covered by herds. This resulted in a higher labor requirement for animal tending. As a result of the increasing requirements of both intensive agriculture and Pastoralism, the two practices diverged and specialization took place. Both developed alongside each other, with continuing interactions. Other proponents of this view include Levy (1983) and Hole (1996). Another theory is that Pastoralism was derived directly from hunting and gathering. In this view, the researcher argued that the hunters of wild goats and sheep already had knowledge of herd dynamics and the ecological needs of the herd animals. These groups were already mobile, and followed wild herds on their seasonal round which forms the origin of Nomadic life.

The process of domestication began before the first wild goat or sheep was tamed as result of the selective pressure of hunter prey-choice acting upon the herd. In this way, wild herds were selected to become more manageable for the proto-pastoralist nomadic hunter and gatherer groups.

Turkana Community lies in the marginal area of North western part of Kenya known as Arid and Semi-Arid land characterized by lack of rain and poor soil among other cases. As regards to the Concept of Pastoralism, the Turkana community has also built their base livestock and culture. From the above description, it is shown that Pastoralism takes place mainly in marginal areas, where cultivation is not possible. Animals feed on the forage of these lands; an energy source which humans cannot directly utilize. The herds convert the energy into sources available for human consumption: milk, blood and meat. There is a common conception that pastoralists exist at basic subsistence. This

assumption is not true; groups often accumulate wealth and can be involved in international trade. Complex exchange relationships exist with horticulturalists, agriculturalists and other groups; pastoralists rarely exist exclusively with the products of their herd. Mobility allows pastoralists to simultaneously exploit more than one environment, thus creating the possibility for arid regions to support human life. Rather than adapting the environment to suit the "food production system" the system is moved to fit the environment.

The researcher`s take in this concept is that Pastoralism is well adapted to the environments where it exists; it is a successful strategy to support a population with the limited resources of the land. Important components of the pastoralist adaptation include; low population density, mobility, and dynamism, and complex information systems.

After the review of literature on Nomadic Pastoralists, several thematic areas has been researched about the Turkana Nomadic Pastoralists but nothing has been said about the effects of the emerging socio economic changes on Turkana Community`s nomadic livelihoods.

2.3.1 The Kyrgyz Pastoralist of the Soviet Union

Nomadism was the center of the economy of Soviet Union prior to Russian Colonization at the turn of the 19th and 20th Century, when they were settles into agricultural villages, (Khazanov, 1994). In regard to the Kyrgyz people, they were able to change so fast to sedentary life because there was a good relationship between them and their government.

The author has not given us a comprehensive climatic condition of the areas inhabited by the Kyrgyz people. May be the shift was so fast because their areas was productive to support agriculture in all aspects.

From the write up, the Kyrgyz people was just a one community unlike a country like Kenya which has 42 tribes. The aspect of flexibility will not be realized when dealing with multi-communities. The other critic is that, it is not healthy to move all the Nomads to live a sedentary life. This study expects to analyze the linkage between modernization and Nomadic livelihood so as to provide the way forward for the Turkana Nomads.

2.3.2 The Sogotra Archipelago of Yemen

The Soqotra, the main island of the Archipelago, is a community of once predominantly non-nomadic transhumant pastoralists, who are now engaged in increasingly non-pastoralist livelihoods, with a unique language and a mixed ethnic composition undergoing an accelerated change process driven by a dual incorporation process: on the one hand, the Yemeni government's modernization of its infrastructure and consolidation of its political incorporation into the national community; and, on the other, a United Nations led internationalization of its economy through the implementation of an environmental protection and ecotourism development program, (Elie, 2007).

Based on what Elie (2007), found about the Soqotra pastoralist of Yemen, it is noted that this community was a small community confined in an island. Being few in number, the Yemen government had to liaise with their internal political ideology to engage in modernization process. The unique thing that helped the Soqotrans was that the Yemen

government had a stable structures on modernization process in conjunction with the UN`s internalization of its economy through the implementation of an environmental protection and ecotourism. For the Pastoral communities to appreciate the activities of modernization it is the role of her government to spearhead the whole activity but the conditions are; the government should be in a position to offer alternatives or optional ways of livelihoods because it is not a sudden process but a gradual process that is transitional.

2.3.3 The Tuareg Pastoralists of Niger

Tuareg pastoralists and their herds flee south into Nigeria from Niger during the crisis. A particularly strong example of this is based in the Sahel zone in Africa, where human mismanagement by pastoralists was blamed for desertification and depletion of resources. The problems were actually due to previous interference and particularly severe climate conditions. However, researchers suggested a solution to the problems, offering rational basis for further privatization of land. This encouraged more intrusion and the transfer of land from tribal peoples to the state or to individuals. However, modernization and privatization programs negatively affected the livelihood of the pastoralist societies and actually worsened the ecological impact, (Philips, 2001).

From the above statement, it is evidence that modernization and privatization programs worsened the lives of the Tuareg Pastoralist, This means throughout the world, it is believed that the pastoralist way of life is an efficient system to adopt and maintain; one of the few ways of supporting a population in a difficult environment and representing a

sustainable approach to land use. However, there is need for the Pastoralist community to evaluate the worthiness of the pastoral economies if it is sustaining or not. The effects of modernization on the Tuareg of Niger made them to diversify their way of life.

2.3.4 Bedouin Pastoralist Community of the Kingdom of Saudi Arabia

The Bedouin Pastoralist Community lives in the Kingdom of Saudi Arabia. With the advent of modernization, however, the rapidly growing urban population created a sharp demand for mutton, preferably from local breeds. A strong domestic market emerged, causing Bedouins to restructure the composition of their herds and to adopt technologies that could overcome traditional constraints, (Gardner, 2003). In the pre-modern era, herd maintenance meant a constant search for food and water across this highly variable landscape.

Bedouin culture had developed a highly efficient communication system, embossed upon a template of familial relations and tribal identity, but also extending through complex networks to other tribes in the peninsula. Knowledge of rainfall was a critical asset, and the exchange of such information was a primary theme in many forms of social contact, (Gardner, 2003).

2.3.4.1 The Evolution of the Saudi Welfare State.

The traditional Bedouin livelihood system went through a series of fundamental changes with the influx of petroleum wealth. A vast health care system was forged. Modern universities, free to citizens, were constructed and the Bedouin coped with the

elimination of civil positions and the dearth of opportunities in government-funded labor positions (particularly in the National Guard), by refocusing upon the core component of their traditional livelihood - raising sheep, goats, and camels on the rangelands. These same factors, however, led many non-Bedouin to diversify their livelihoods. In villages and towns large and small, non-Bedouin Saudi hired knowledgeable foreign laborers to manage herds in the surrounding desert. The income generated by this activity provided some respite from the financial cutbacks at the state level. The same way the Bedouin Pastoralists survived modernization while being pastoralist, even the other pastoralists in the other parts of the world will survive, (Gardner, 2003).

2.3.4.2 The Elimination of Trans-Border Migration

As is the case in much of the world, the national boundaries of Saudi Arabia and its neighbors were imposed over a more fluid spatial distribution of indigenous cultural groups. The Bedouin are a nomadic people by tradition, and both tribes and tribal allegiances spanned the convenient borders demarcated by world powers Bedouin were no longer at liberty to move their herds to the verdant Iraqi pastures in times of stress, nor could they pass through Iraq to places further north. This fundamental change meant that the Bedouin were forced to stay in the Kingdom during times of drought. Compounding the problem, the relative stability of the Saudi regime drew Iraqi and Kuwaiti Bedouin south—the northern deserts of the Kingdom functioned as a safe harbor for Kuwaiti and Iraqi Bedouin fleeing the aftermath of the Gulf War, and many remain in the region to date. This fact, combined with the closure of northern migration routes, increased the

pressure on the fragile desert rangelands, and similarly increased the prevalence of communicable disease due to overcrowding on the rangelands, (Gardner, 2003).

2.3.4.3 Large-Scale Labor Importation

A walk through the cosmopolitan port city of Jeddah is enough to convince the observer of the vast demographic changes brought about by the influx of petroleum wealth. Nearly every small shop is run by people from the Indian subcontinent. Foreign laborers sweep the streets, pump gas, cook in the countless restaurants that dot the streets, and fill an untold number of other urban occupations, (Gardner, 2003).

2.3.4.4 Subsidized Barley Supplements

The Bedouin began to incorporate barley grown in Iraq into their livelihood as a mechanism for weathering particularly long droughts. Over time, these tentative reaches into the global agricultural market expanded, first to include barley from Eastern Europe, and then barley from Australia and beyond. As part of the government's extensive safety net, price supports held the market price of barley at an artificial low, (Gardner, 2003)

2.3.4.5 Land Tenure and the Nationalization of Rangelands

Even before the influx of petroleum wealth, the Arabian Peninsula, long at the global crossroads between east and west, played host to a diverse set of peoples. In the context of the Kingdom, however, identity has always been tethered to the tribe, and despite the sweeping tides of modernization, tribal affiliation remains a centerpiece in the identity of urban and rural Saudi alike. The Pastoralists are as well still tied in their tribal lines. This

is a model to be borrowed by the Turkana nomadic community because of the presence of the black gold in Turkana County.

2.3.4.6 Trucks, Roads and Water

Perhaps no change in the Bedouin livelihood has had more of an impact than the introduction of motorized transport. Vehicles and motor bikes were able to change their way of doing things and even increased the efficiency.

In the modern life, Infrastructure has become a backbone of any society. For the case of the Turkana Community, modernization is impacting their life style; technology has entered into their way life.

2.4 The Samburu Pastoralists of Kenya

The Samburu pastoralists of Kenya have shifted from Barter trade to Market economy due to recurrent drought and famine has increased in frequency, (Konaka, 1997). As coping strategies for the Samburu communities, they have brought in the aspect of livestock market in their economy. When there are signs of drought, the Samburu Community resorts to disposed of their livestock and keep them in form of money which cannot be affected by the effects of weather. They have abandoned barter trade and appreciate the modern use of currency.

2.5 The Maasai Pastoralists of East Africa

The Maasai Community is among the indigenous tribes of Kenya. Attempts to "develop" their pastoral production systems using Western concepts and models have typically

failed (Desta, 2003). However, they now find themselves faced with change because of the inexorable demands of modern life, with ever-decreasing land resources effectively threatening their culture and forcing them to seek other alternatives such as agriculture (Ndagala, 1992) and to some extent petty trade (Holland, 1996).

2.5.1 Changing way of Life

For centuries the Maasai have lived under a clan-based communal system in the area of Kenya's Rift Valley Province (and south in Tanzania). In the past few years, however, they have started to embrace private ownership of their land resources. The change particularly affects their semi-nomadic life way, which is common with the movement of their livestock as the seasons change. Most of their expansive land is now divided into group ranches, schemes and privately owned small parcels. The new land management system restricts their movement because previously boundaries were ignored during dry seasons, allowing livestock owners to roam throughout the land in search of pasture. It is the Maasai tradition not to deny anyone access to natural resources such as land and water. This socialist approach to life often puts the Maasai in conflict with their neighbors (those who have either purchased land from the Maasai or who acquired it through private treaties during the colonial days in Kenya). In their thinking, when Mother Nature takes away the rains, everyone should understand the concept of sharing, (Gluckman, 1965), especially for protecting their wealth-livestock.

Privatization of land resources is in some Maasai quarters seen as the source of all their problems because wealthy individuals (not necessarily Maasai) are accumulating this

resource, thus limiting their access to water sources and grazing areas. A further constraint is that many designated game reserves fall within Maasai territory. Although revenue from tourism is supposed to benefit the community, it does not always trickle down to the bottom due to corruption. Priority in the parks is given to wild animals, thus further reducing grazing areas.

As it becomes increasingly difficult to keep livestock as the main source of income, some Maasai are looking for ways to supplement their sources of wealth. While some Maasai are venturing into agriculture against their wishes, others have started microenterprises. Most enterprises are those that either meets their local requirements (retail business) or that related to livestock (sale of milk or hides and skins), (Holland 1996.)

2.5.2 Entrepreneurship.

The concept of entrepreneurship is fairly new among the Maasai. As Holland,(1996) concluded, "One of the reasons why so few of the local Maasai tend to enter ventures such as the local retail business is because of the enormous difficulties involved in running such an enterprise surrounded by a network of immediate family, extended family, relatives and friends." It is extremely difficult for Maasai to run an enterprise in their home areas where it is hard to refuse credit and even harder to collect it once given (Holland, 1996).

The traditional Maasai economy revolves around livestock. For centuries enterprise to Maasai was the use of livestock to barter for other goods (clothing, beads and more recently grain owing to changes in their diet) between themselves and other communities.

Livestock is the center of their social political and economic life. A Maasai prayer "Meishoo iyiook enkai inkishu" (May the Creator give us cattle and children) this demonstrates the importance of livestock to the Maasai economy. Note that cattle come first before the children. Cattle are the most valuable of all Maasai livestock (Ndagala, 1992). Others are goats, sheep, donkeys and dogs. Maasai elders as well as pastoralist researchers; (Schwabe, 1996) , 1984) oppose modernity as recognized by the Western world, which is changing towards a market economy where entrepreneurship is the key component of development. Changes are simply perceived as an interference with their strict social structure. Community roles are defined. Older men take the advisory role in their homestead, women build the houses and are responsible for childcare and all household chores, and young men are in charge of security. Young boys herd livestock (Ndagala, 1992).

2.5.3. Property Ownership

For almost a century since the British colonized Kenya, the Maasai have refused to abandon their communal ownership of land resources. However, studies (Fratkin, Galvin and Roth, 1994) show that many pastoralist communal systems have collapsed and are being incorporated into the national system of market economy. Indeed through various government policy documents (GOK, 1969), most of the communal land was divided into group ranches. Some of these ranches have been subdivided into individual parcels of land, and some individuals further divide their portions and sell them for cash. This is significant in many ways because it signals that the Maasai recognize the value of money

and are actively seeking to acquire it. Furthermore, they are now seeking to succeed individually in a highly competitive environment. These are the principal tenets of capitalism and as they become entrenched in the Maasai culture, it is only a matter of time before we will see many Maasai involved in entrepreneurship. As in any capitalist economy, the changes may not be a smooth ride for all the Maasai.

According to the Maasai pastoralists, worsening droughts is a major change in their environment. They have identified some of the causes of this change as being increased settlement, destruction of ecosystem balance (through poaching and loss of wildlife) and unnecessary acceptance of relief food. The Maasai had to opt for an alternative way of livelihoods after seeing that life is become tough and also the pastoral economies not very much sustaining. According to Rutten, (1992) the Maasai pastoralists preferred diversification, intensification and commercialization of their economy as recorded among their group of respondents by early 1990. Rutten (1992) also shows us that the Maasai households were also involving themselves on cultivation.

2.6 Physical features and drainage system of Turkana Central district

The study area is bordered on the east by Lake Turkana and on the west by the Loima hills which rise to 1,850 m above sea level. The Turkwel and Kerio rivers, with their sources in the Cherangani highlands and Mt. Elgon, flow through the area. The Turkwel river flows northwards through the center of the study area to Lodwar town before veering eastwards to empty into Lake Turkana. At Lodwar, the Turkwel is joined by the

Kawalase river which flows in a south-easterly direction from its source in the Loima hills and Pelekech ranges.

The Kerio River flows directly north through the eastern part of the study area before emptying into Lake Turkana. Surface flow of these two major rivers is limited to the rainy season and the period immediately after the rains. Otherwise the water is sub-surface and is made available by the digging of wells in the river channel. The rest of the study area is a plain that gently undulates in places and is interspersed with low hills of volcanic origin that are steep-sided and rise up to 950 m above sea level in some places.

2.6.1 Wind.

Wind is an important climatic factor in the study area, not only because of its desiccating effect but also because of the dust storms that accompany it, especially between November and March when winds with speeds of 10 knots or more have been recorded around Lodwar.

2.6.1.1 LAKE TURKANA WIND POWER PROJECT



Figure 2.3: Lake Turkana Wind Power Project

Source: Vision 2030

2.6.2. Lake Turkana Wind power Project

The Lake Turkana Wind Power project is of significant strategic benefit to Kenya, and one of the largest private investments in Kenya's history. It aims to provide 300MW of reliable, low cost wind energy to the national grid, equivalent to over 20% of the current installed electricity generating capacity. The wind farm site is located in Marsabit District in northern Kenya, approximately 50km north of South Horr Township and 8km east of Lake Turkana. The 'Project' will comprise a wind farm, associated overhead electric grid collection system and a high voltage switchyard whereby Turkana Central will also stand to benefit.

2.6.3. Temperature

The low-lying plains in Turkana are hot and dry, and temperatures are high, but fairly uniform throughout the year, with an average daily range of about 24 degrees to 38 degrees centigrade and are seldom lower even at night. Ground absorption and radiation can increase temperatures over lava flats to at least 67 degrees centigrade (Coe 1972). During the day, the extremely high temperatures are accompanied by strong easterly winds sweeping across the largely barren country-side, carrying large quantities of sand.

2.6.4 Evaporation

Evaporation is more a function of the above three climatic factors than a factor in itself. Due to the low elevation, low rainfall, strong winds and high temperatures in the study area Evaporation is very high, with very little variation between years. The average

annual potential evaporation of over 2,100 mm is nine times the average annual rainfall for the area. This shows that there is a clear moisture deficiency for vegetation growth.

2.6.5 Rainfall.

In the Turkana region, climate variability, caused by uncertain rainfall patterns, is one of the most unstable factors that affect pastoral production systems (Ellis 1994). Long-term data from various stations show that rainfall in Turkana is not only sparse, but is spatially and temporally erratic. Rain tends to fall intermittently, but it can occur any time. Ideally rain starts in March or April and usually extends on through August and September with most precipitation concentrated in April (Ecosystems, 1985).

Rain often comes in sharp storms in Turkana, and because of minimal grass cover and baked soils, runoff can produce flash floods. Groundwater recharge may be helped by floods flowing to the eastern, drier parts of the district. Recharge is highest where the ground cover is sandy gravel

2.6.6 Natural capital.

Natural capital is the natural resource stocks, and environmental services from which resource flows and services useful for livelihoods are derived (DFID 1994; Scoones 1998; Ellis 2000). Natural capital is the basic source of livelihood in rural communities, such as the Turkana community. The natural ‘capitals’ here includes; lake Turkana, oil and grazing land; Grazing land is a critical asset for pastoralists. For instance, the carrying capacity of the land may affect the resilience of pastoral households by placing

limits on options with respect to size, diversification and dispersal of their herds. (Ekwee Ethuro 1994; Gulliver 1955).

2.6.7. Fishing Industry in Lake Turkana

According to Mr Fredrick the deputy district Fisheries officer based in Lodwar, Lake Turkana is expected to produce 25,000 Metric tons of fish per annum but instead it is now producing between 5,000 and 7,000 metric tons per annum which is very low compared to the expectation. (Fredrick, 2011)

2.6.8. Oil Drilling In Turkana County

The district is current subject of crude oil exploration in Block 10BB and Block 13T and has potential for geothermal, solar and wind energy. On 26 March 2012, Kenyan President Mwai Kibaki announced that oil had been discovered in the Turkana District after exploratory drilling by Anglo-Irish firm Tullow Oil and he further stated that, “It is... the beginning of a long journey to make our country an oil producer, which typically takes in excess of three years. We shall be giving the nation more information as the oil exploration process continues. ” The President said significant oil deposits were found in the North Rift Valley region. The oil was discovered in Nakukulas area, 12 kilometers from Lokichar in Turkana South Constituency. The exploration for oil in Turkana is being conducted by Tullow Oil Company.

The black gold discovery in Turkana region will unlock the grips of poverty from the Turkana Pastoralist community and will also open and offer opportunities for all the other Kenyans



Figure 2.4: Oil Rig at Ngamia One at Nakukulas, Turkana South

Source: Researcher

2.7 Summary of Literature Review

From the literature review, the following are examples of 'drivers of change' which forms a basis for the emergence of the socio economic change among the pastoralists.

- Conflict

- Livestock marketing
- Increased settlement
- Food aid
- Roads
- Corruption
- Population increase
- Increased drought & Climate change
- Competition for land/Oil exploration
- Mobile phones and ICT
- Education for nomadic people
- Political will to support Pastoralism
- Changes to traditional community structures
- New drugs- alcohol and miraa.

In general the drivers of change among the pastoralists are likely to be of three kinds.

a). Those that fall within their control, such as social values or agricultural practices.

b.) Those that fall within the authority of the state, but over which they could exercise influence, such as service delivery, conflict management, land tenure or governance.

c.) Those over which they have little control, such as climate change or population growth, or international dynamics such as terrorism and trade.

The Government of Kenya, including in its recent Economic Recovery Strategy Paper, places a lot of emphasis in the development of microenterprises as a vehicle for creating employment opportunities and eradicating poverty (GOK, 2003). Government programs cover the whole country, and government policy must therefore look into ways and means of improving the livelihoods of the pastoralists whose traditional economic method is under threat from decreasing land resources with an increasing population.

For example, the government is looking at making Kenya a newly industrialized country by the year 2020. Sessional Paper No. 2 of 1997 notes, "The major purpose of this Sessional Paper is to set out national policies and strategies that will lay the foundation for the structural transformation required to enable Kenya to join the league of Newly Industrialized Countries by the year 2020" (GOK, 1997). This goal can only be achieved and sustained if entrepreneurship is encouraged as a way to enhance economic development. The researcher hoped that findings from this study will support the government in its efforts take an informed position for addressing issues relating to the impact of emerging socio economic change Pastoral Communities.

The literature review shows that, the past studies have mixed findings on the impacts of socio economic changes on the Nomadic livelihoods thoughts. Some literature says that socio economic changes worsened the livelihoods of the people and hence made them worse than before. Other review shows that Pastoralism is a viable practice in the range lands as it ascertains proper use of land and environment. This study will seek to explore the trade off and find out the linkage between socio cultural change and nomadic livelihood so as to have a way forward for the Turkana Pastoral Community.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter discusses the study design and methodology used in collecting and analyzing data on the emerging socio economic changes on the Turkana community`s nomadic livelihood. The chapter gives the target population, sampling design and procedure, validity and reliability of instruments, data collection procedure and data analysis method used.

3.2 Scope of Study

The study covered Turkana Central district which is one of the seven districts in Turkana County. The district borders Turkana South district to the south and Turkana North district to the North and Loima district to the west. The district shares Lake Turkana with Marsabit district to the east. It lies between latitudes 00 45' and 10 07' to the south and

longitudes 3600 and 3700 27’ East. The district covers approximately 14,766 km2 of which 3,320 km2 is covered by Lake Turkana with a total population of 134,674 persons. Turkana Central district comprise of three divisions; Turkana Central, Kalokol and Kerio division. (GOK, 2009).



Figure 3.5: A Map of Turkana Centra Sub-County

Source: IEBC

3.3 Research Design

The descriptive design was adopted for this study, this design was appropriate because it concerns with describing the characteristic of a particular individual, or of a group, Kothari (2000).

3.4 Target population

The study was conducted in Turkana Central district with a target population of 134,674 persons. The district is divided into three divisions for administrative purposes thus; Turkana Central division with a population of 58,290, Kalokol division with a population of 42,172 persons and Kerio division with a population of 34,212 persons. (GOK, 2009).

3.5 Sampling Procedure.

A sample is a small proportion of a population selected for observation and analysis (Mugenda and Mugenda, 1999). Sampling on the other hand means selecting a given number of subjects from a definite population as a representative of that population. A sample procedure is a definite plan determined before any data is collected for obtaining a sample from a given population. The study adopted purposive and simple random sampling techniques. According to Kothari (2000), purposive sampling allows the researcher to look for respondents that will give him/her particular information necessary for research. The researcher selected the Pastoralists, former pastoralists, business people, Coordinators of NGOs, Civil societies, Area Chiefs and their assistants, head teachers and heads of departments because of their knowledge that was relevant for the study as shown in the table below;

NAME	**Turkana Central**	**Kalokol**	**Kerio Division**	**Sample Size**
Pastoralists	50	37	40	127
Former Pastoralists	36	30	15	81
Coordinators of NGOs	2	1	2	5
Civil Societies	5	4	2	11

Area Chiefs	4	2	2	8
Assistant Area Chiefs	5	2	2	9
Head Teachers	5	2	4	11
Heads of Departments	5	3	1	9
Business people	8	5	3	16
	120	**86**	**71**	**277**

Table 3.1 : Distribution of Respondent

Source: Researcher

3.5.1 Sampling Size Determination

The Researcher got a sample size of 277 using the following formula, Tamane (1967).

$$N = \frac{N}{1 + N (e)^2}$$

Where n = Sample size the researcher wanted to use

N= Total population (134,674)

e = Margin of error

1= Constant.

The margin of error in this case is 0.060.

Table 3.2: Turkana Central District Population

Source: Republic of Kenya, 2009

Division	**Population**	**Sample Size per division**
Turkana Central	58,290	120
Kalokol	42,172	86

Kerio	34,212	71
Total	**134,674**	**277**

3.6. Data Collection Instruments

The study used the following instruments to collect data;

i. Questionnaires and interview schedules.

ii. Focused group discussions

iii. Observation

iv. Camera

3.6.1 Questionnaires and interview schedules

Data was collected by use of open and closed ended questionnaires. The questionnaires consisted of both open and closed ended questions. The questionnaire for the pastoralist had two sections A and B. Section A, was concerned with the demographic information of respondents; that is gender, marital status, age, occupation and level of Education of the respondent.

Section B was concerned with the effects of socio economic changes. The aim of this section was to identify the socio economic changes that are cutting across the region and how they are impacting on their livelihoods. The dangers emanating from the socio economic changes were also addressed in this section and how they are coping with these changes. The second questionnaire was for the key informants. The whole questionnaire

for the key informants was open ended one. This type of questionnaire gave room for the respondents to put down their opinions.

Interview schedule was administered to the selected respondents who did not know how to read and write on their own. Interviews allow the researcher to obtain firsthand information from the respondents. It allows the researcher to have his questions clear and elaborate where necessary (Lucey, 1996). Kothari (1992) states that a focused interview is meant to focus attention on the given experiences of the respondent and their effects. The interviewer has the freedom of guiding the questions in a particular sequence. The researcher probes for in depth information.

3.6.2 Type of Data

Primary data was obtained from the field by use of the questionnaires and structured interview schedule. Secondary data was obtained through the review of relevant literature. During this study the researcher collected data from all the sources as a wide range of information was needed to inform the study.

3.6.3 Data Collection procedure.

Data used was collected from both primary and secondary sources. The main research instruments used to collect primary data was the questionnaires and interview schedules. The questionnaires were distributed with the help of research assistants with the objective of reaching a large number of respondents.

3.6.4 Validity of Research Instruments.

Cook and Campbell (1979) define validity as the best approximation to the truth or falsity of a given inference, propositional in the area under study. According to Kerlinger,(1973) a research instrument is considered valid, when the content selected and included in the questionnaires and interview schedules are relevant to the variables being investigated. To establish the content validity of the instruments used for the study, the researcher consulted widely with the instruments used for the study to ascertain that they would generate the required information before going to the field.

3.6.5 Reliability of the Research Instruments

Reliability refers to the measure of the degree to which a research instrument can yield consistent results or data after repeated trials with the same individuals under similar conditions. To obtain reliable data, the questionnaires must be well structured for it becomes easy for respondents to answer and maintain the consistency (Kothari, 1992).

The research data collection tools were tested at Sigor division in west Pokot between July` and August`2011. The researcher preferred Sigor division in West Pokot County because it has the same climatic characteristics as that of Turkana County. The respondents' comments were also in cooperated in questionnaires that helped to improve the instruments for the study.

According to Feuerstein (1986:86), if you fail to pre-test your questionnaire properly, it is possible your entire data may be spoilt. Pre-testing the questionnaire enabled the

researcher to find out if the questionnaire was consistent with the objectives of the study, determine how long it was going to take to interview a respondent and the best time to interview. It also helped the researcher identify and rectify weaknesses, ambiguities and omissions in the questionnaires.

3.7 Data Analysis and Presentation.

After the data was collected from the field it was edited, cleaned and validated for omissions, completeness, clarity and accuracy with consistency in preparation for coding process.

The researcher used descriptive statistical method to analyze data. The findings were presented in tables, pie charts, graphs, bar graphs, photographs and in prose form.

3.8. Ethical Consideration

The researcher observed privacy and confidentiality in dealing with respondents. Any information the researcher got in the course of the study will not be shared with anybody for whatever reason not unless with express permission from the owner.

The researcher sought consent from the relevant authority for all the subjects used in the study for example the Research permit. It is an offense and also unethical to carry out a research in an area without a prior permission from them.

The researcher also ensured that all subjects participated voluntarily. The researcher asked the respondents to give their views during the study voluntarily without forcing and embarrassing them.

During the study the Researcher observed openness and honesty in dealing with other researchers and research subjects.

CHAPTER FOUR

DATA PRESENTATION , ANALYSIS AND INTERPRETATION

4.1 Overview

This chapter deals with how the data collected from the field was presented and interpreted using various methods. The end of the chapter explains how the data which was collected from the field answers the objectives of the study as outlined in the following chapters. This chapter therefore presents the findings of the study as per the research objectives.

4.2 Data Presentation

The respondents were drawn from the three divisions that make up Turkana Central district as shown in the in Table 3.1.

4.2.1 Socio Economic changes taking place in Turkana Central Sub-County.

From figure 4.6 below, urbanization is one of the highest socio economic change that has taken place in the area 33.33% followed by climate change with 27.87% while development of social amenities followed with 24.04% and emergency of technology is also evident at 14.75%.

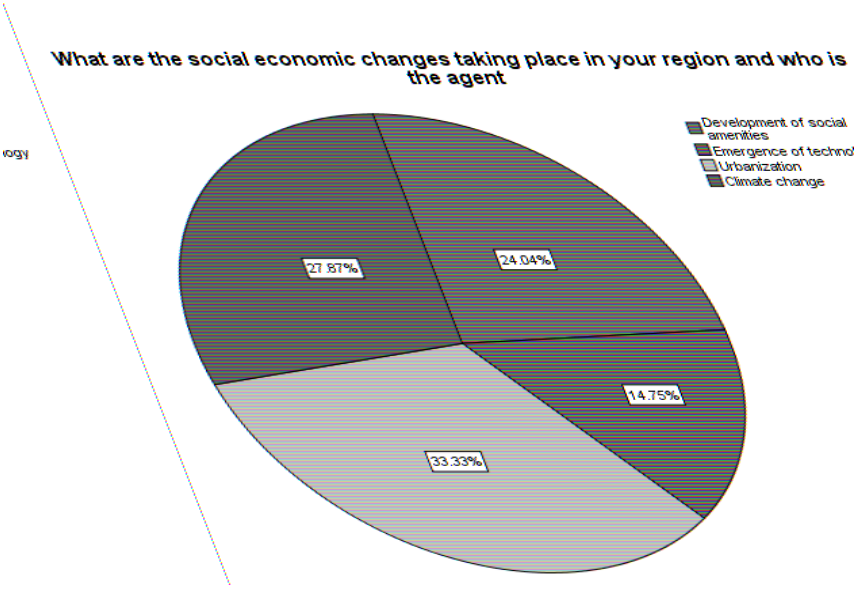
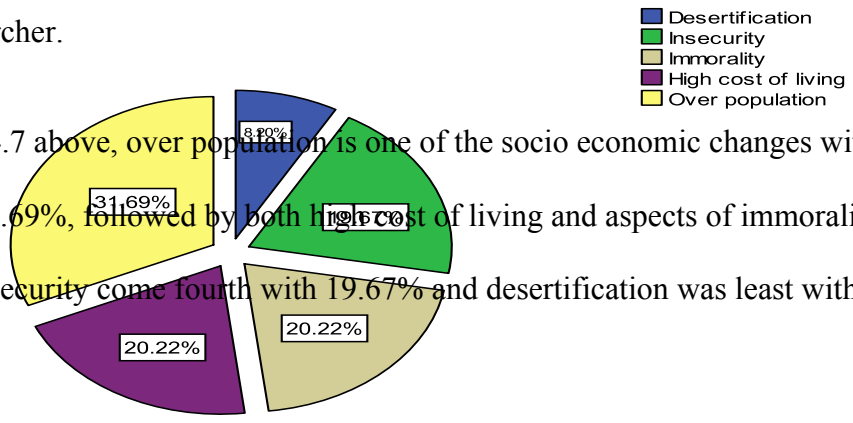


Figure 4.6: Socio Economic changes taking place in the area

Source: Researcher

4.2.2.Dangers emanating from socio economic changes taking place in Turkana central district.

Figure 4.7: Dangers emanating from socio economic changes taking place in Turkana.



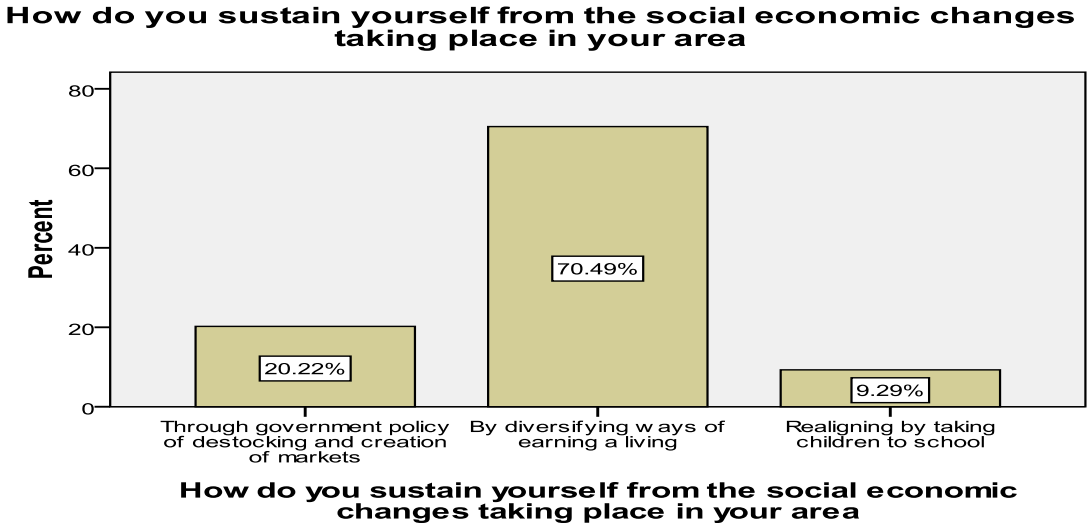
Source: Researcher.

From the figure 4.7 above, over population is one of the socio economic changes with the highest rate of 31.69%, followed by both high cost of living and aspects of immorality at 20.22% while insecurity come fourth with 19.67% and desertification was least with 8.20%

4.2.3 How are the Turkana Community locals sustaining themselves from socio economic changes

From the table 4.3 below, diversification way of living has the highest rate of 70.49% followed by the government`s act of restocking and creation of markets for the local

people which has 20.22% of the overall while a low percentage of 9.29 % have realigned themselves with taking children to school.



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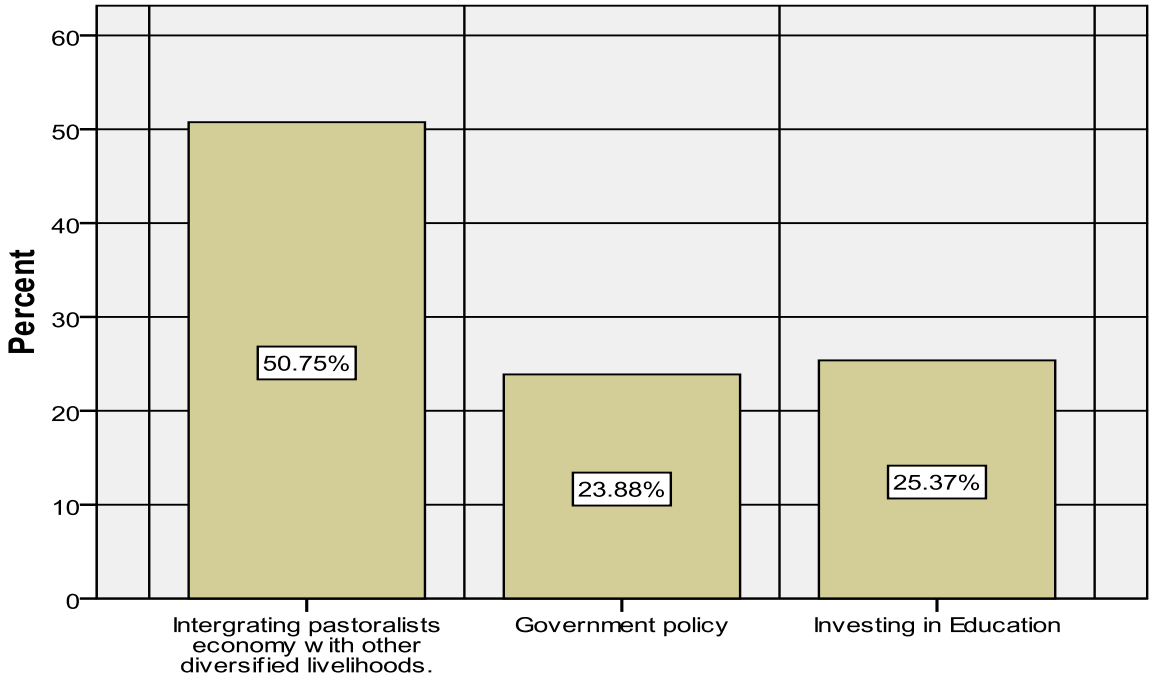
Source: Researcher.

4.2.4 How the Turkana Nomadic community are coping with the socio economic changes.

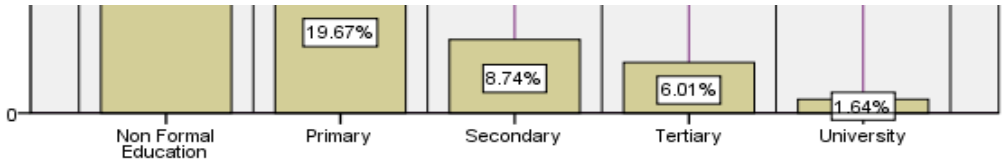
From the table 4.4 below, the Turkana community are coping with the socio economic changes by integrating pastoralist`s economy with other diversified livelihoods by scoring 50.75%. The community has also appreciated the idea of taking the children to school which the study rated at 25.37% while government policy came last with 23.88 %. This means what the government has been doing to them every time there is a dry spell is to give relief food for example maize and beans. Like other nomadic in the other parts of the world, the Turkana pastoralist had to seek for alternative way of surviving in the midst of emerging socio economic changes.

T

S



How are theycoping up with the socio economic changes that are sweeping across their area



4.2.6 Respondents Occupation

It was important to establish the occupation of the respondents across the study area in order to investigate if there is any relationship with the emerging socio economic change that is cutting across the region.

From the pie chart in figure 4.8 below, it reveals that the majority of the respondents were pure pastoralists with 53.01% followed by 23.50% of those who abandoned Pastoralism to pursue other livelihoods, while those that engaged in entrepreneurship and those who are not sure of their occupation garnered 19.13% and 4.37% respectively. This is an indication that there is a high rate of unemployment in the area of study. This is shown by a high percentage of the people who are pastoralists whose main activities is taking care of animals.

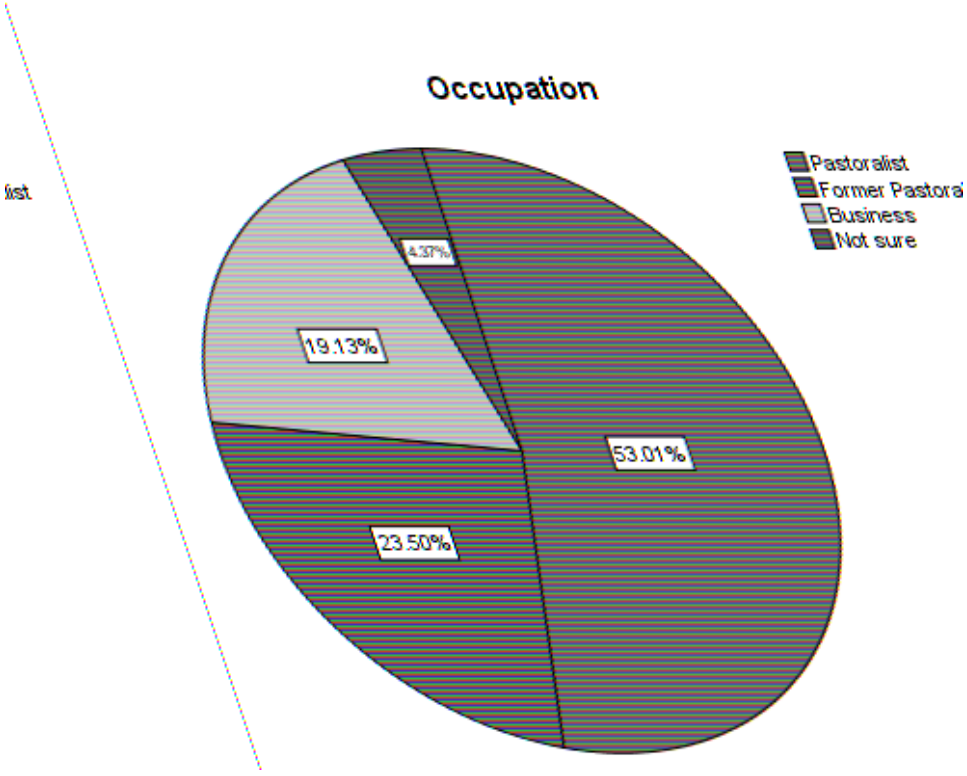


Figure 4.8: Respondent`s Occupation
Source: Researcher

4.2.7 Interlink between the respondent`s occupation and the emerging socio economic change.

Table 4.6: Occupation and emerging socio economic change
Source: Researcher

Occupation	What are the social economic changes taking place in your region and who is the agent				Total
	Development of social amenities	Emergence of technology	Urbanization	Climate change	
ılist	21	16	29	31	97
Former Pastoralist	9	8	19	7	43

Business	12	3	10	10	35
Not sure	2	0	3	3	8
Total	**44**	**27**	**61**	**51**	**183**

From above table 4.6, the respondents who are pastoralists have been affected very much with climate change. The recurrent dry season has changed their migratory pattern, hence both the pastoralist and the former pastoralist are moving towards the urban centres for alternative way of living. This is as a result of the emerging socio economic change that is cutting across the region.From the above table, it is noted that the primary occupation of the respondents in this region is pure Pastoralism, but diversity has become the term of the day due to the emerging socio economic change that is occurring everywhere.

4.2.8 Respondents Age

Age is a very important aspect of any researcher. In this study, the researcher wanted to know the ages of the respondents so as to gauge if there is any bearing with the emerging socio economic change is threatening the universe.

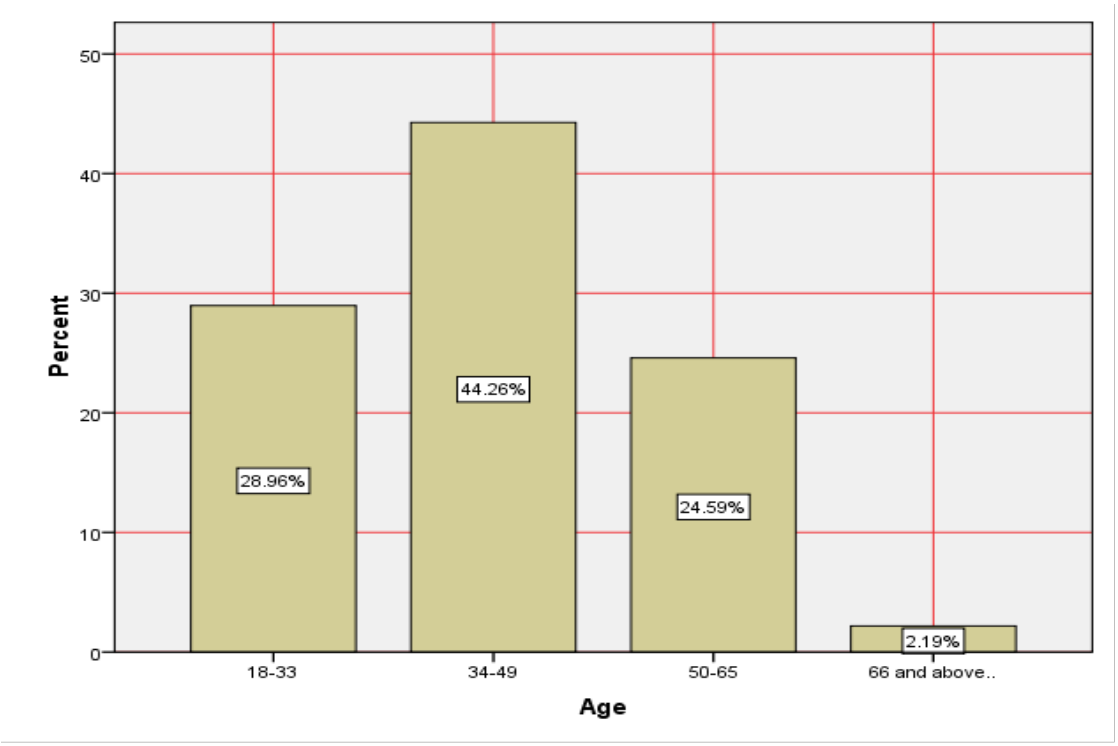


Table 4.7: Respondent's Age

Source: Researcher

The total respondents for the study were 277. The respondents were distributed as per age brackets as shown in the table 4.7 above. However, it is evident that a large number of respondents were aged between 34-49 years, implying that the researcher basically

obtained information from adults who are able to conceptualize and give views that were critical for the study.

The researcher observed that that, the urban areas had a higher number of people with ages ranging between 18-33 years and between 34-49 years old while the rural areas had people with ages ranging from 66 and above. This shows that the youth were mainly attracted to the urban areas in search of employment opportunities while those in the rural areas mainly engaged in Pastoralism and a few indulging in fish industry along Lake Turkana. The researcher wanted to see the connection of the respondents` age on the emerging socio economic change and the following was the findings;

4.2.9 Marital Status

From the pie chart in figure 4.9 below, it is evident that married couples were good in responding to this research, this has been attributed to the fact that they are from established families who knows much about their communities hence giving this study validity of thought. From the results, it shows that the most affected group in the area of study by the socio-economic change are the married couples. This is showed by the study analysis.

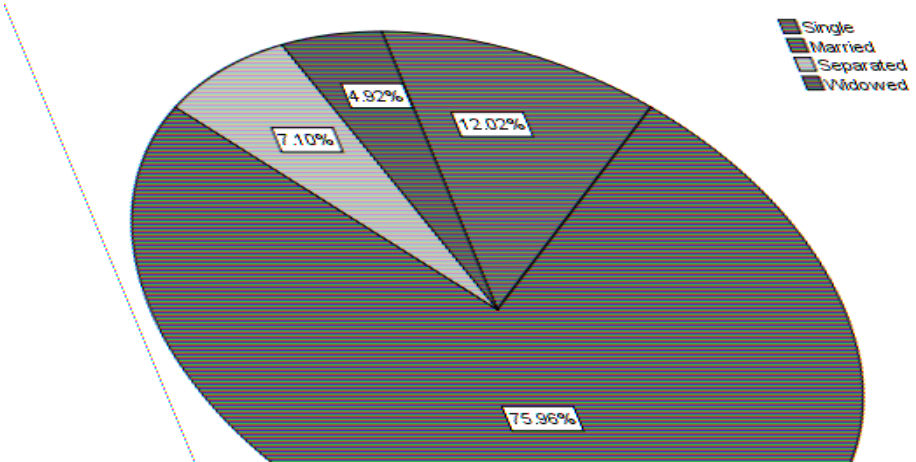
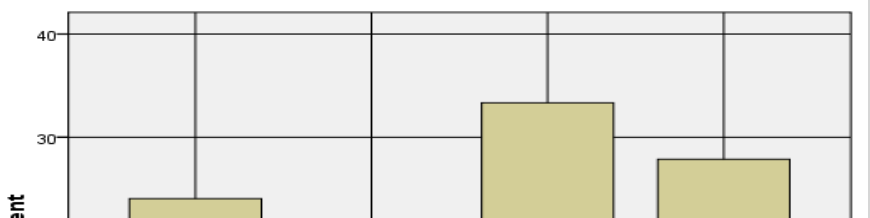


Figure 4.9: Respondent`s Marital Status
Source: Researcher

The researcher also wanted to see the impact of marital status on the emerging socio economic change and the following were the findings;

4.2.10 Impact of socio economic changes.

Table 4.8: Impact of Socio Economic Changes on Turkana Community.
Source: Researcher



The effects of the emerging socio economic change among the Turkana Pastoralists are numerous as shown in table 4.8 above. The rate of urbanization is 33.33%. Given 10 years from now it is likely to double and speed population growth in towns associated with high crime rates, eroding of cultural values, pressure on scarce resources like water etc.

Climate change and development of social amenities also have a bearing on the emerging socio economic changes. This is because when herders reduce the number of animals they own then those range land will be repossessed by the government and institutions and industries will be put there. All these issues is as a result of emerging socio economic change.

4.2.11 Strength and Opportunities in Turkana Central district

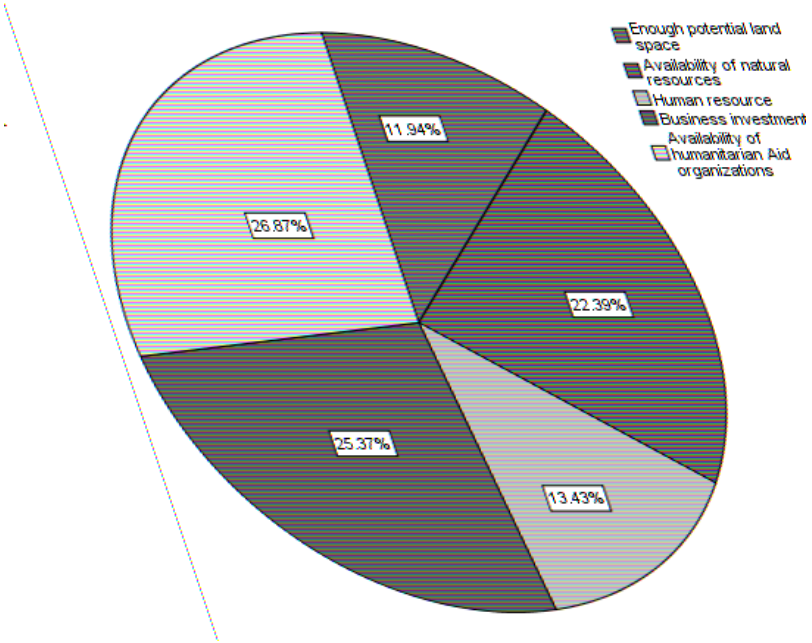


Figure. 4.10: Strengths and opportunities in Turkana Central district

Source: Researcher

The researcher also wanted to assess the strengths and opportunities in Turkana central district in connection with the emerging socio economic change. The findings were as follows.

According to figure 4.10 above, Turkana pastoralist Community have some strengths and opportunities of diversification in their region. They have a wide base of business investment with 25.37% that starts with discovery of black gold in Ngamia one and other places where gold and precious stones are mined. e.g Makutano, Kimabur and Morulingarengan. Lake Turkana supports fishing industry and provides proteins to the locals. Turkana community has also a vast land which is viable for bigger industries for the sake of investment. Availability of Aid and humanitarian organization in the region stands at 26.87% this puts this pastoralist community in the world map. 13.43% is attributed to human resource which is also available; the study revealed that there is a lot of cheap labor to be hired because as discussed earlier the community has a high rate of illiteracy so it is not easy to get a skilled labour in the area.

4.3 Synthesis of the Findings

This study revealed that socio economic change is compared to tsunami wind which has a capacity to sweep a region within a short time and consequently Turkana community is not exceptional. The emerging social changes brings imbalance in population growth if

not checked. The study has revealed that the Turkana young men and women have abandoned the nomadic lifestyle hence showing embracing diversity for their livelihoods as discussed in the following chapters.

4.3.1 Objective One: The Socio Economic Changes taking place in the region

4.3.1.1 Trade

From the data presentation above, it showed that the Turkana Nomads have now started engaging in small trade like burning and selling charcoal to support their livelihood. Along the highways for example from Lodwar to Kalokol or to Kakuma, one is able to see sacks of charcoal by the roadside.

4.3.1.2 Agriculture

The study also revealed that some people who live along River Turkwel have started agricultural activities for example, irrigation schemes whereby the grow sorghum, sugar canes, "Katumani maize" and vegetables. Most of the produce is for subsistence hence improving their livelihoods.

The study has found out that the emerging socio economic changes taking place in Turkana Nomadic community has a positive bearing on their livelihoods because it has given them an alternative on improving their living standards.

4.3.1.3 Technology

During the period of the study out of 10 respondents the researcher comes across at least 7 people poses mobile phones. This is an indicator that technology penetrated the Turkana rural strong holds. The only challenge they are facing is the source of power for

their phones. Most of them use battery chargers. The transport sector has improved drastically as shown below.



Figure 4.11: Boda Boda transport has created job opportunities for the youth

Source: Researcher

From the figure. 4.11 above it shows that the emerging changes cannot be stopped. The pastoralists are not using donkeys for transportation the way it used to be since time immemorial. Nowadays the transport sector has improved whereby the school drop outs have indulged themselves in the bodaboda business.

4.3.1.4 Urbanization

Urbanization in itself is a socio economic change. Upcoming of trading centers and settlements along the highways is a recipe for urbanization. People are attracted to lavish and easy life. According to the, climate change is one of the major socio economic change that is clearly pronounced followed by the aspect of urbanization and poverty being the least. Poverty level has been checked by several things which have stabilized the livelihoods of the Turkana community. This does not mean that there are no other socio economic changes happening in the region. The Turkana livelihoods have improved because they have integrated pastoralists' economy with other ways of living e.g venturing into small businesses. Urbanization is associated with the high cost of living and immorality. This is because people of different ethnic groups converge together in one area so as to earn a living. In due process their population will increase overnight and hence immorality will emerge. The study showed that Urbanization as a social economic phenomenon affects the Turkana Community negatively.

4.3.1.5 Desertification

Turkana region is one of the districts in the ASAL areas, the researcher found out that when they talk about diversification, small business venture is inclusive. The researcher

found out that the respondents burn charcoal for a living. The study found out that this is a threat to the environment, but this is the only option for this vulnerable people who living away from the urban centers and they have started check points for selling charcoal along the highways as shown below.

Figure 4.12: Illegal burning and selling of Charcoal for a livelihood poses environmental hazard.

Source: Researcher

Poverty will not leave their doors as they are living a life of hand to mouth. Like the man in the picture below. Losing his livestock he started collecting and selling firewood using his bicycle.

As much as life is hard and the Turkana pastoralists want to embrace diversity, this is hazardous to the environment as it depletes forests and local available species.

Figure 4.13: Firewood vendor struggles to cope with the odds of socio-economic change

Source: Researcher

4.3.16. Insecurity

The study also revealed the aspect of insecurity. The pastoralist community depends on livestock for a living. But due to climate change when there is no grass and water for animals, it is obvious they have to resort to an alternative hence go and raid their neighboring communities something that is dangerous and a crime in its sense. In a scenario where there is over population, there are always issues associated to this, for example, exerting pressure on the scarce available resources.

4.3.2 Objective Two: Assessing the Impact of Socio Economic changes

The study found out that the emerging socio economic changes that is happening in Turkana central district shows several activities as discussed below;

4.3.2.1 Over Population.

There is a high movement of the Turkana Pastoralist community from the rural areas to the urban settings. This study showed that quite a number of people who were pure pastoralists have opted to live in towns and start doing business like small shops, butcheries and others. This socio change has made the urban centers be over populated hence creating pressure on a few resources available in towns.

This impacts negatively on the urban people because this population will be a breeding point of crime and cross cultural issues like miss communication due to culture and language.

4.3.2.2 Diversification

The Turkana Community`s economy is fragile in that it is not sustaining its population. The main way for the Turkana community is to seek other ways of livelihoods other than depending on Pastoralism alone. The study showed that the Turkana people who are living along Lake Turkana have indulged themselves in fishing industry. Some are buying and transporting fish to other parts of the country hence boosting their economy.

There are also irrigation schemes along River Turkwel which has been sponsored by NGOs like World Vision and Oxfam. For the Turkana women who are living within Lodwar and its environs they are making baskets and mats. This activity has raised their living standards such that they are able to provide a meal for their families. Education or taking children to school has become a major investment for the Pastoral community.

This is basically because they say, goats or cows can be stolen but nobody is able to steal your knowledge. The study established that Paradigm shift has become a relief for the emerging socio economic changes on the Turkana pastoralist's livelihood. Instead of just practicing nomadic life, The Community is also taught how to engage in other ways of earning a living.

4.3.2.3 Diluted cultural morals

The study has shown that when population grows very fast in the urban centers, it results to congestion and scramble for a few available resources. The urbanites normally adopt the urban culture where the cultural and traditional values are forgotten and replaced with a new culture. This shows a paradigm shift from Pastoralism towards modernism.

This cultural mix has become a problem so much with the children who are born in such locations. If the parents are not keen their children can easily lose their cultural and traditions ties and hence absorbing a foreign culture. This focus perceives emerging socio economic changes negatively.

4.3.3 Objective Three: Coping Strategy by the Turkana Pastoralists.

The researcher was interested in investigating how the Turkana pastoralist community is coping with the impact of emerging socio economic changes surrounding them. The respondents were only drawn from the key informants and the findings were shown as in the table 5.11 below;

Table 4.9: Coping strategy by the Turkana Pastoralists

Source: Researcher

Improved Socio Economic Change	**Frequency**	**Percent**
Improved infrastructure	7	10.4
Enhanced competition and	33	49.3

diversity		
Education has been embraced	12	17.9
Awareness of current issues	15	22.4
Total	**67**	**100**

From the table 4.9 above, it shows that there is an aspect of competition and diversity in livelihoods whereby 49.3% of the respondents agreed that socio economic change has brought about the aspect of competition and diversity.

There is also a great deal of awareness of current issues whereby 22.4% showed that they are aware of the current news each day. Last but not least Education has been embraced at 17.9% of the respondents. This shows that by the year 2030 there will be enlightened Turkana pastoralist community who will integrate current issues with their traditions. From the figure below, these are quarry stones which are used in building permanent houses. These stones are meant for sale. This shows that the Turkana community has also known about the money economy by venturing into business activities.

Figure 4.14: Quarry Stones business at Nasiger Village as a way of coping with the emerging socio economic changes.
Source: Researcher

4.3.3.1 Improved infrastructure.

According to table above, the respondents also anticipates improved infrastructure in a few years to come. This has been facilitated by the new constitution which creates County system with the goal of decentralizing government machinery to the grass root

where the people are found. The researcher found out that there is need for good tarmacked road within the pastoralist areas as this will speed up development in this region. The study area is well interlinked by tarmacked road to a number of towns as illustrated in figure 4.15 below.



4.3.3

From

lady

then

long

started a kiosk or a grocery where they sell foodstuff in small quantities while in the village. This study therefore shows that most of the Turkana women did not get a chance to go to school. This has made them vulnerable to poverty and discrimination. The only job they can do is small businesses that will enhance them to work to sustain their families.

Figure 4.16 Agnes Akalale in her Kiosk,

Source: Researcher.



Figure 4.17: Turkana women buying brooms from the locals to boost their economy.

4.3.3.3 Investing in Education

All these time, the Turkana community thought that life was only made up of livestock alone and that if one does not have livestock he is not a man. The study has shown that with the emergence of socio economic change it has proved that there are other alternatives of livelihoods. The study showed that the Jua Kali sector has come up as an alternative for the people who did not get

chance to go to school properly. For example those ones have started scrape metal business hence getting earnings for the sustenance of their families. There is high influx of people from other parts of the country flocking to Turkana land in search of employment opportunities, trade and investment. This has caused pressure on limited infrastructural facilities like water and housing.

4.3.3.4 Linking the rural areas with urban centers with equal development opportunities.

Bodaboda Transport has also come up in Turkana central Constituency, though this is just a wave that is cutting across the whole country but it has become rampant in Turkana Central where one gets young people riding Bodaboda motor bikes for Business even without a valid driving license. The Bodaboda business has made life easy for both the Pastoralists and the people who live in town. The study revealed that, some Pastoralists sold cows and camels so as to buy a Motorbike or a Bicycle which has acted as an

efficient mode of transport in the villages. The research has showed that these motor bikes are used as "Ambulances" for carrying sick people to hospitals where vehicles cannot access. Also the study showed that the Turkana Pastoralists are using bicycles in ferrying charcoal to urban centers for sale. This modern innovation has become an inter-link between the rural and the urban areas.

4.3.3.5 Education Levels in Turkana Central District

According to Mulu, 1999, about 70% of the population are nomadic pastoralists, the men being in charge of physical security and the supervision of the animal herds. The women are in charge of the animal products (meat, blood, milk und ghee) and feeding the families. The rest of the population has settled around trading centers. Generally, the settled populace, especially the Turkana, are poor, unable to raise enough food for themselves and thus reliant almost entirely on relief supplies for the most part of the year.

Poverty in this community manifests itself in the form of hunger, illiteracy and lack of access to basic education, adequate clean drinking water, minimum medical facilities and shelter. This situation has been caused by lack of resources other than livestock, poor integration with the rest of the economy and drought. The move from a nomadic existence based on a livestock economy to a settled lifestyle, which is dependent on the monetary system, has meant shifting from the lifestyle the -people understand best to another new and under-resourced one. It is this section of the pastoral population that needs to be assisted in the alleviation of poverty. The Turkana women did not have the

chance to go to school they have resorted to engage in weaving industry to provide for their families as shown below.

Figure 4.18: Weaving & Basket industry in Nayuu village for sustainable livelihoods.

Source: Field Study

4.3.3.6 Synthesis of the Findings

This study has revealed that socio economic change is compared to tsunami wind which has a capacity to sweep a region within a short time and consequently Turkana community is not exceptional. These changes can be viewed at two distinct angles. One is that it can be appreciated positively as it brings a competition from the outside experience which will be a driver of change for development. For example, with the establishment of social amenities like hospitals and schools, has made be move out of their culture and traditions of doing things.

The other point from the study is that, emerging social changes brings imbalance in population growth. This is shown by the mushrooming of settlements along the roads and the urban centers. The problem here with mass movement of people from the rural to the urban is population increase. This growth is associated mostly with crime rates going high, exertion of pressure of scarce resources at their disposal. The study has revealed

that the Turkana young men and women have abandoned the nomadic lifestyle; they have opted to live a sedentary life.

The pastoralists are now attracted to living near highways so that they can venture into business like burning and selling charcoal to the motorists. This aspect attracts movement from the rural to the urban centers in search of good life hence destabilizing the Pastoralist economy.

The study also showed that there is a mix of culture in the town of Lodwar. This aspect has both advantage and the disadvantage. The advantage is that the cultural mix promotes unity and co-existence while the side effect is that, there is a danger of children in town to forget their culture and traditions completely since it will be eroded by the western culture within the mixed population. As Africans we need to maintain our identity even if there are changes cutting across the region. The study also revealed that the socio economic change makes the cost of living high. This is basically because the needs of the people will surpass their supply. Therefore there is need of balancing development in both rural and the urban setting.

From the study, burning of charcoal for selling and fetching of trees for firewood possess a threat to our environment. The study showed that the people who indulged themselves in charcoal burning found themselves doing these when they lost their animals to drought and famine and therefore they were left with no otherwise but to fell trees and burn charcoal against the Government`s policies. The study showed that apart from the threats posed by the emerging changes on the Turkana Nomadic pastoralists, these changes has

also necessitated the building new infrastructure like tarmacked high way, mobile phones, etc.

According to this study, there is need for the Turkana Community to mainstream the emerging changes on their day to day activities. For example they need to own mobile phones for effective communication instead of wasting energy and time in passing information where there is no communication. From the study, if the current situation will not be controlled by the government then the status will be worse. e.g There is need for the government to build industries in the rural areas so that more jobs will be created in the villages and people will start again moving back to the villages hence creating an interlink between the rural and the urban setting.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The study has observed numerous emerging socio economic changes among the Turkana Pastoralist Community. Most of them revolve around climatic change, urbanization, technology, followed by high cost of living, immorality, insecurity and desertification. The lifestyle of the Turkana Pastoralists has also changed. It is therefore certain that socio economic change is a phenomenon than cannot be avoided.

5.2 Conclusion

Emergency of socio economic change cannot be overlooked by anybody at this time. The mind the pastoralists had before has been passed by time because the emerging socio economic change has altered all the structures which were present and the only opportunity left for them is to integrate the emerging socio economic changes as discussed earlier in the document.

As we strengthen the positive side that arises from the socio economic change, we need also to appreciate the negative elements that to some extent jeopardizes the traditional

livelihoods of a certain group. As for the case of Turkana central, the county government needs to have functional plans to enhance the Turkana community be able to survive at this period transition. Also with the recent discovery of oil in Turkana County at Ngamia One barrel near Nakukulas in Turkana south, there is need for the government to start laying down measures on how the Turkana community can benefit from the oil industry since they have been displaced from their grazing land and therefore they stand to have their share from the product as a matter of policy.

For the Turkana Pastoralists to cope with the trends of socio economic changes there is need for diversity to supplement the nomadic livelihood. In this case, investing in Education will have to be one of the priorities in Turkana region. For the realization of equity growth and distribution of economy between the urban areas and the rural, there should be an-interlink between the rural areas with urban centers with equal development opportunities. There is need to exploit the economic potential that exists in Turkana central like Fishing industry at lake Turkana, Irrigation scheme along river Turkwel, Goal mines at Kimabur, black gold, precious stones & Artifacts, this can help spur its growth and create employment for the residents thus making it economically viable.

5.3 Recommendations.

The following recommendations were made by the researcher as a way of appreciating the emerging socio economic change in order to make pastoralist livelihoods sustainable in Kenya;

i. There is need for lobbying and advocating for education investment in Turkana County as these will be a supplement to the Pastoral economy.

ii. There is need for the Pastoralists to diversify their way of life other than depending on Pastoralism per se, for example, the fishing industry in Turkana has to be improved and the government has to give funds and trained personnel to train the Turkana local fishermen on the best methods of fishing and to provide modern fishing gear.

iii. Agricultural initiative has to be considered as there are water source in the area. For example River Turkwel which passes through Lodwar town.

iv. The Oil Companies operating in Turkana and other NGOs should offer scholarships to the locals, for example, Tullow Oil drilling Company in Turkana Central and BGP Oil Company in Twiga one in Turkana south.

v. There is need of Strengthening institutional framework and capacity of local governments while appreciating the fact that the county councils (rural areas) and Urban councils (urban areas) provide an interlink between these regions. These will bring a uniform impact of socio-economic change in Turkana as a region hence a balance in development.

5.4 Suggestion for further studies.

- This study dealt only on the emerging socio economic changes on Turkana community`s nomadic livelihoods, there is need for a further research that could be done in the following area,

- ✓ Alleviating poverty through traditional methods.

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http://en.wikipedia.org/wiki/Turkana_District 22nd January'2012

APPENDICES

APENDIX I : QUESTIONNAIRE FOR PASTORALISTS

Dear Respondent

My name is Joshua L. Lemuya, I am a student at Moi University-Eldoret West Campus undertaking A Degree of Master of Science in Development Studies. As part of the requirement for the course I am conducting a research **on "EMERGING SOCIO-ECONOMIC CHANGES ON THE TURKANA COMMUNITY`S NOMADIC LIVELIHOOD"**

You are therefore required to help me fill the questionnaires with the required information; any information provided will be treated with utmost confidence since the research is purely for the academic purpose only. *(Tick where necessary)*

INSTRUCTIONS

(i) Tick where appropriate

(ii) Fill in the blank spaces

Section A: RESPONDENT`S PROFILE

1.) Gender	a.) Male [ ] b.) Female [ ]
2.) Marital Status	a.) Single [ ] b.) Married [ ] c.) Separated [ ] d.) Widowed [ ]
3.) Age	a.) 18-33 [ ] b.) 34-49 [ ] c.) 50-65 [ ] d.) 66 and above… [ ]
4.) Occupation	a.) Pastoralist [ ] b.) Former Pastoralists [ ] c.) Business [ ] d.) Not Sure [ ]
5.) Level of Education	a.) Non Formal Education [ ]

	b.) Primary	[ ]
	c.) Secondary	[ ]
	d.) Tertiary	[ ]
	e.) University	[ ]

SECTION B

EFFECTS OF SOCIO-ECONOMIC CHNAGES

6.) What are the socio-economic changes taking place in your area?

……

……...

7.) How are these changes impacting your livelihoods?

……

……

……

8.) What are the dangers emanating from the socio economic changes in your area?

……

……

……

9.) How are you coming up with these changes?

……

……

……

APPENDIX II

QUESTIONNAIRE FOR KEY INFORMANTS

Dear Respondent

My name is Joshua L. Lemuya, I am a student at Moi University-Eldoret West Campus undertaking A Degree of Master of Science in Development Studies. As part of the requirement for the course I am conducting a research on **"EMERGING SOCIO- ECONOMIC CHANGES ON THE TURKANA COMMUNITY`S NOMADIC LIVELIHOOD"**

You are therefore required to help me fill the questionnaires with the required information; any information provided will be treated with utmost confidence since the research is purely for the academic purpose only.

Section A: KEY INFOMER'S PROFILE

1.) Name of your organization:……..……

2.) What is your organization doing?.....

……

……

3.) What are the socio-economic changes emanating from your day today involvement with the Turkana Pastoralist Community?

……

……

……

4.) How is your organization affecting the socio-economic livelihoods of the Turkana Pastoralists?

……

……

……

5.) How has socio-economic changes impacted the Turkana Community?

……

……

……

6.) What challenges is the Turkana Community facing in light of the Socio-Economic changes taking place around them?

……

……

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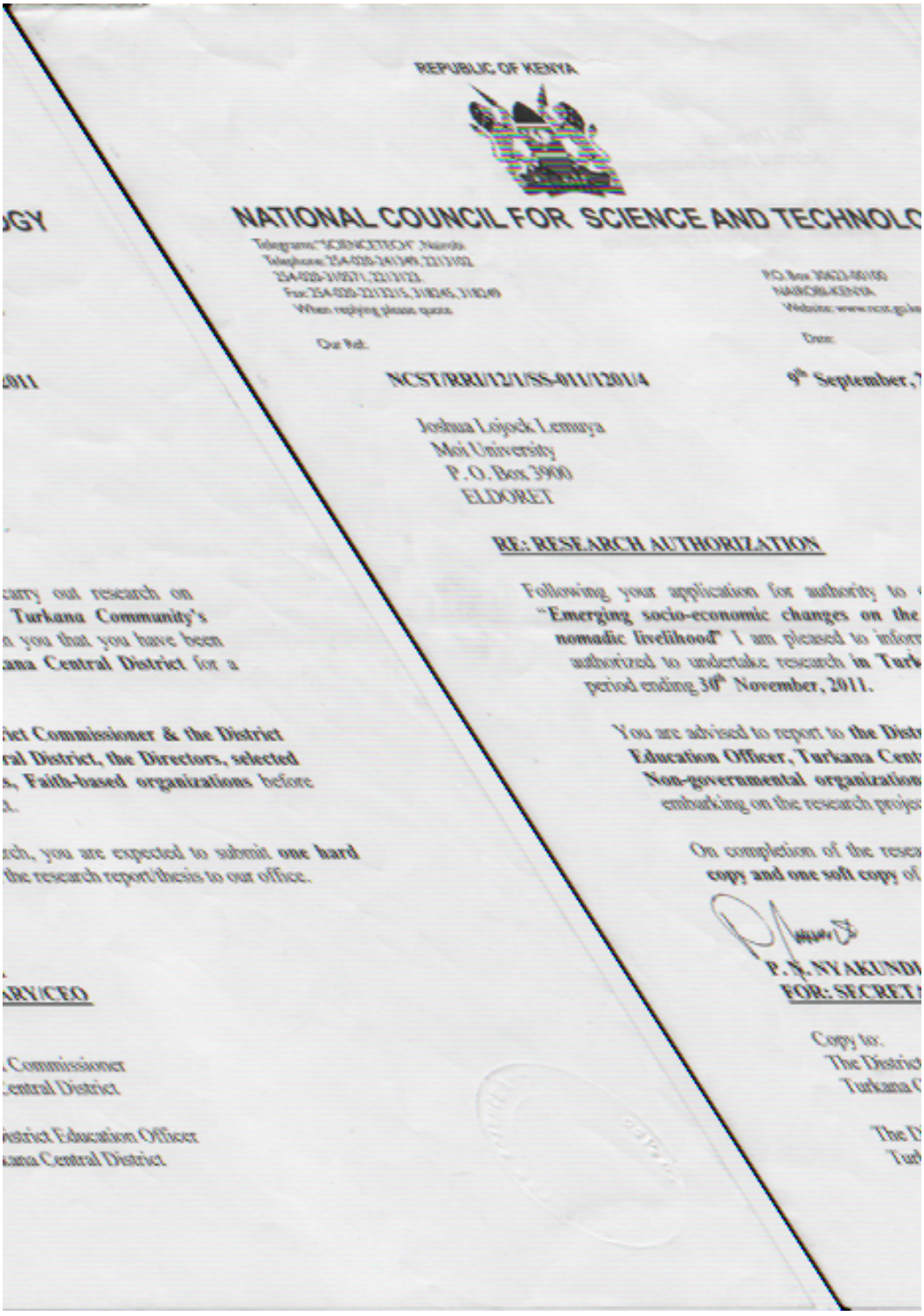
7.) How is the Turkana Community coping up with the Socio-Economic changes cutting across the region?

.....

.....

.....

APPENDIX III : RESEARCH AUTHORIZATION



REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLO

NCST/RRI/12/1/SS-011/1201/4

9th September,

Joshua Loipsik Lemunya
Moi University
P.O. Box 3900
ELDORET

RE: RESEARCH AUTHORIZATION

Following your application for authority to
"**Emerging socio-economic changes on the nomadic livelihood**" I am pleased to inform
authorized to undertake research **in Turk**
period ending 30th November, 2011.

You are advised to report to **the Distr**
Education Officer, Turkana Centr
Non-governmental organization
embarking on the research proje

On completion of the rese
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P. S. NYAKUNDI
FOR: SECRET

Copy to:
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Turkana C

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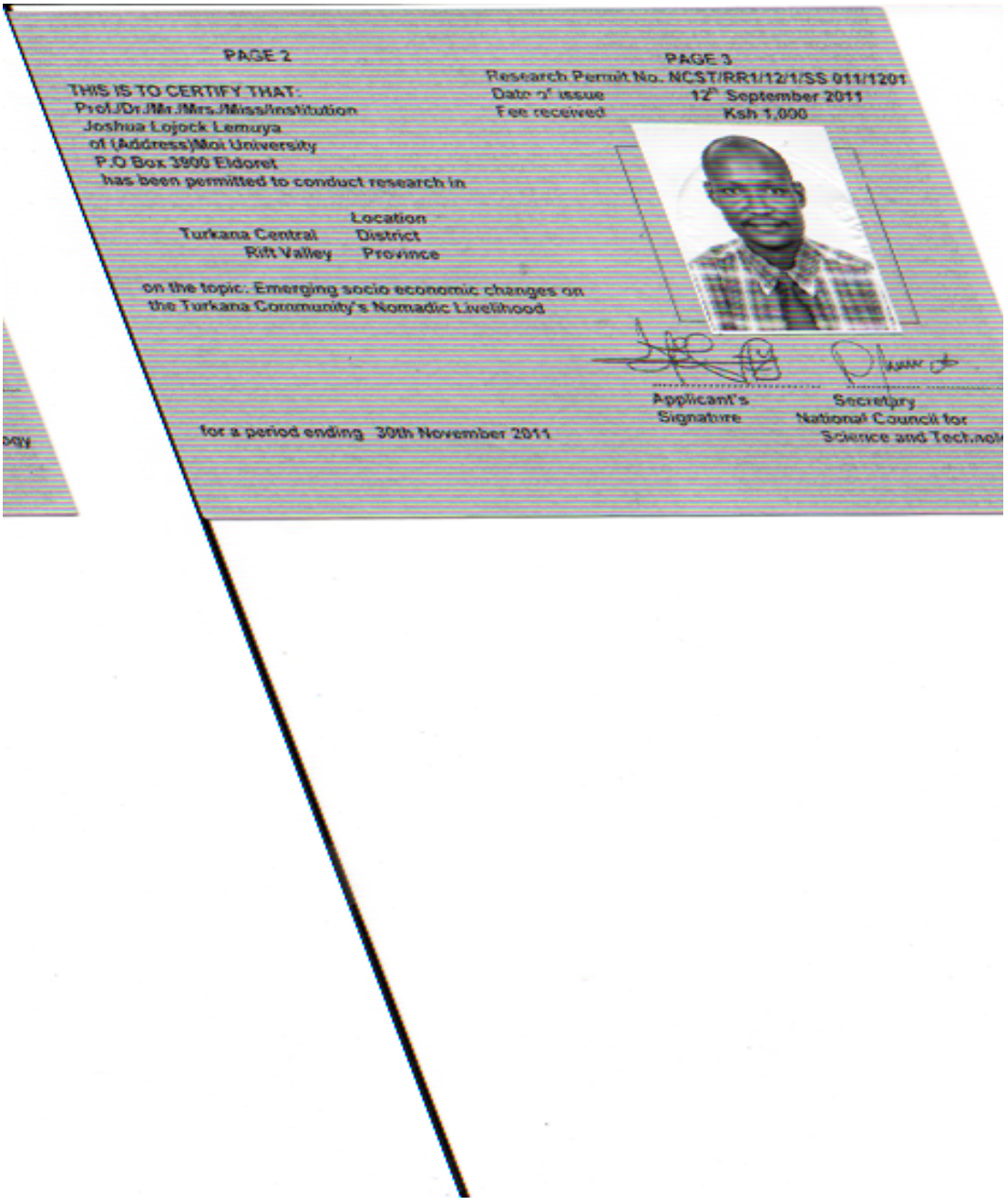
rch., you are expected to submit **one hard**
the research report/thesis to our office.

RV/CEO

Commissioner
Central District.

District Education Officer
ana Central District.

APPENDIX IV : RESEARCH PERMIT



PAGE 2

THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Joshua Lojock Lemuya
of (Address)Moi University
P.O Box 3900 Eldoret
has been permitted to conduct research in

Location
Turkana Central District
Rift Valley Province

on the topic: Emerging socio economic changes on the Turkana Community's Nomadic Livelihood

for a period ending 30th November 2011

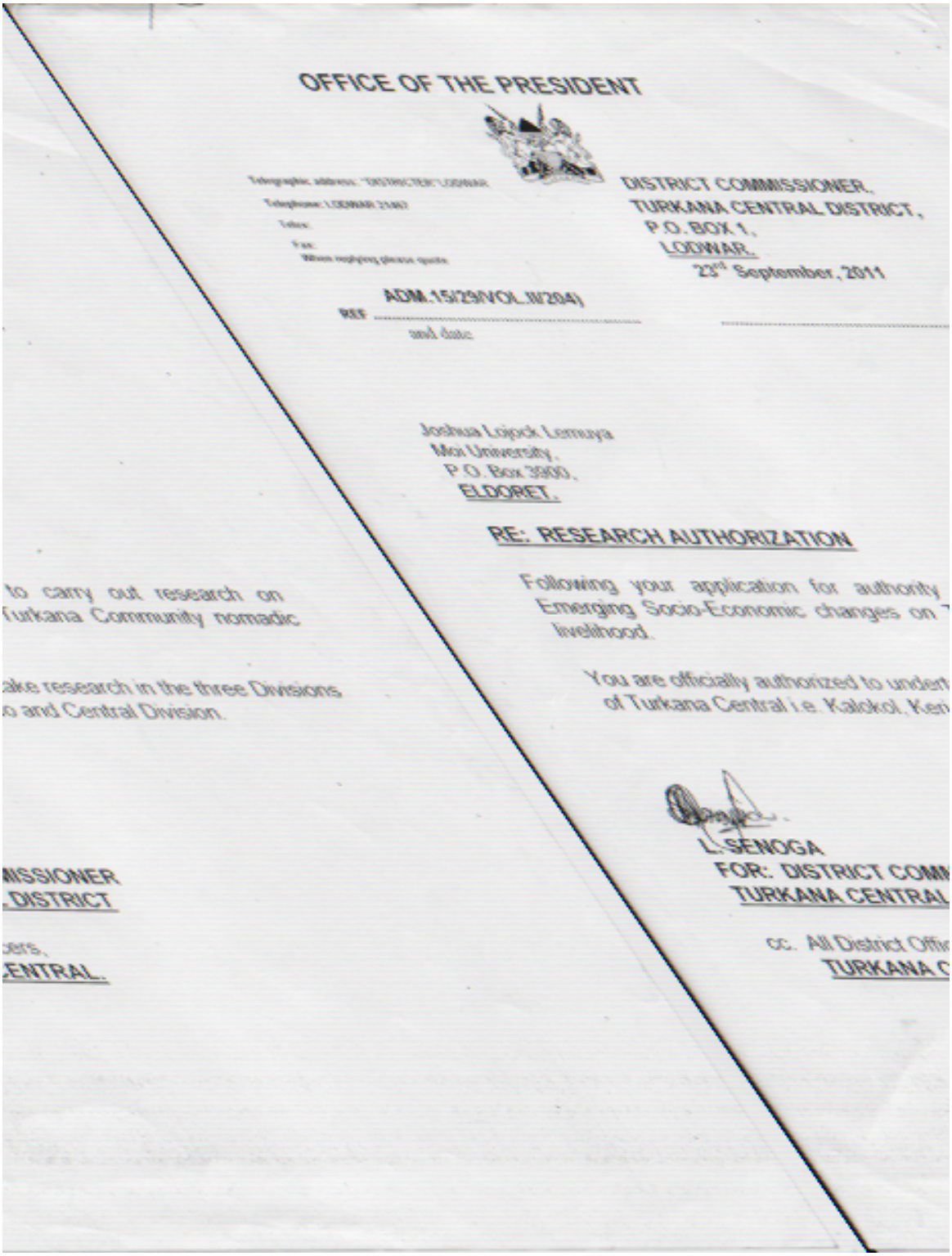
PAGE 3

Research Permit No. NCST/RR1/12/1/SS 011/1201
Date of issue 12th September 2011
Fee received Ksh 1,000

Applicant's Signature

Secretary
National Council for Science and Tech.nol

APPENDIX V : LETTER OF AUTHORRIZATION FROM DISTRICT COMMISSIONER



OFFICE OF THE PRESIDENT

DISTRICT COMMISSIONER,
TURKANA CENTRAL DISTRICT,
P.O. BOX 1,
LODWAR.
23rd September, 2011

ADM.15/29/VOL.IX/294)

Joshua Lojack Lemuya
Moi University,
P.O. Box 3900,
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority
Emerging Socio-Economic changes on T
livelihood.

You are officially authorized to undert
of Turkana Central i.e. Kalokol, K-er

to carry out research on
Turkana Community nomadic.

ake research in the three Divisions,
o and Central Division.

L. SENOGA
FOR: DISTRICT COMM
TURKANA CENTRAL

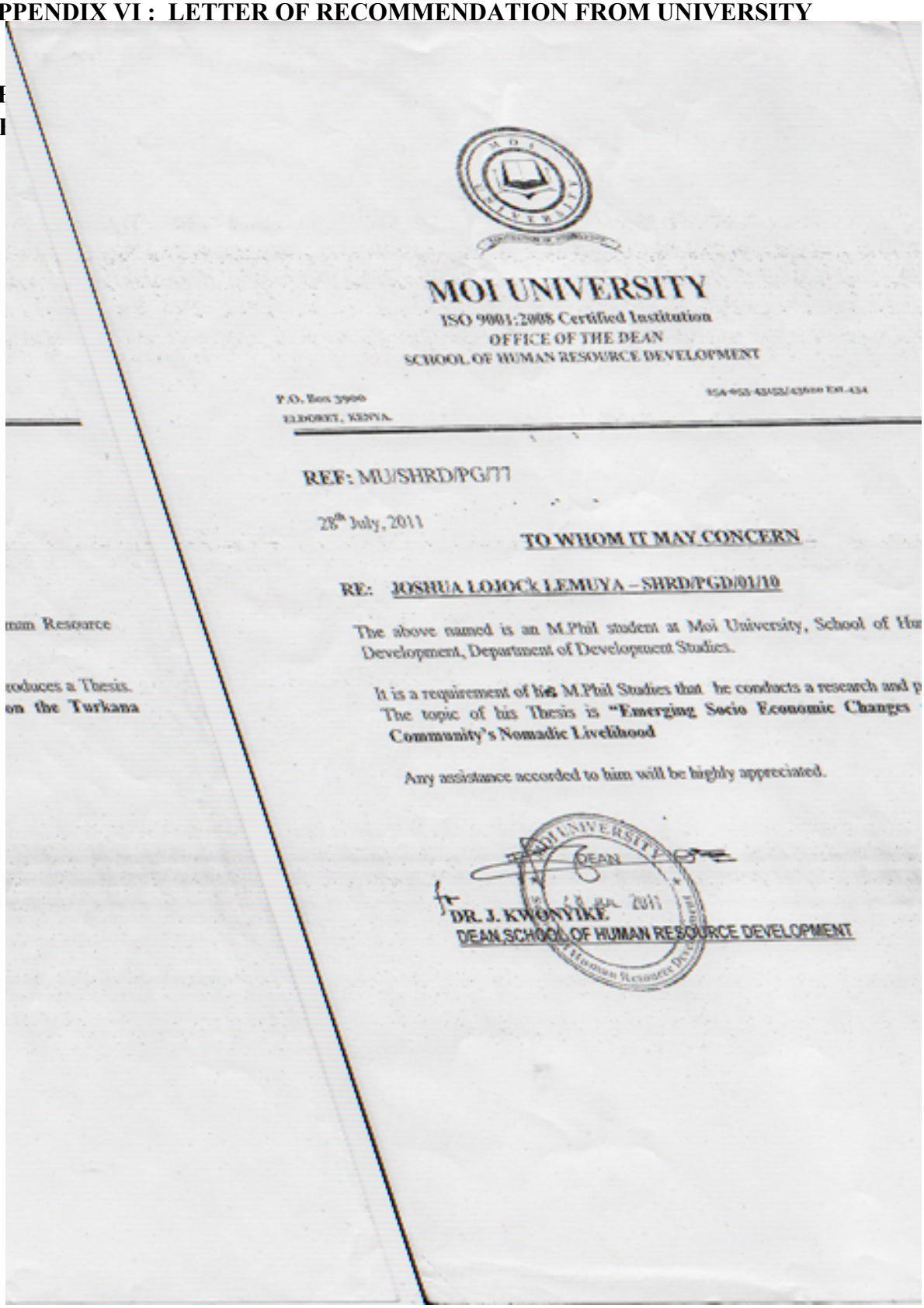
cc. All District Offic
TURKANA C

MISSIONER
DISTRICT

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ENTRAL.

APPENDIX VI : LETTER OF RECOMMENDATION FROM UNIVERSITY

AI
OI



MOI UNIVERSITY
ISO 9001:2008 Certified Institution
OFFICE OF THE DEAN
SCHOOL OF HUMAN RESOURCE DEVELOPMENT

P.O. Box 3900
ELDORET, KENYA.

REF: MU/SHRD/PG/77

28th July, 2011

TO WHOM IT MAY CONCERN

RE: JOSHUA LOJOCk LEMUYA – SHRD/PGD/01/10

The above named is an M.Phil student at Moi University, School of Hu
Development, Department of Development Studies.

It is a requirement of the M.Phil Studies that he conducts a research and p
The topic of his Thesis is **"Emerging Socio Economic Changes**
Community's Nomadic Livelihood

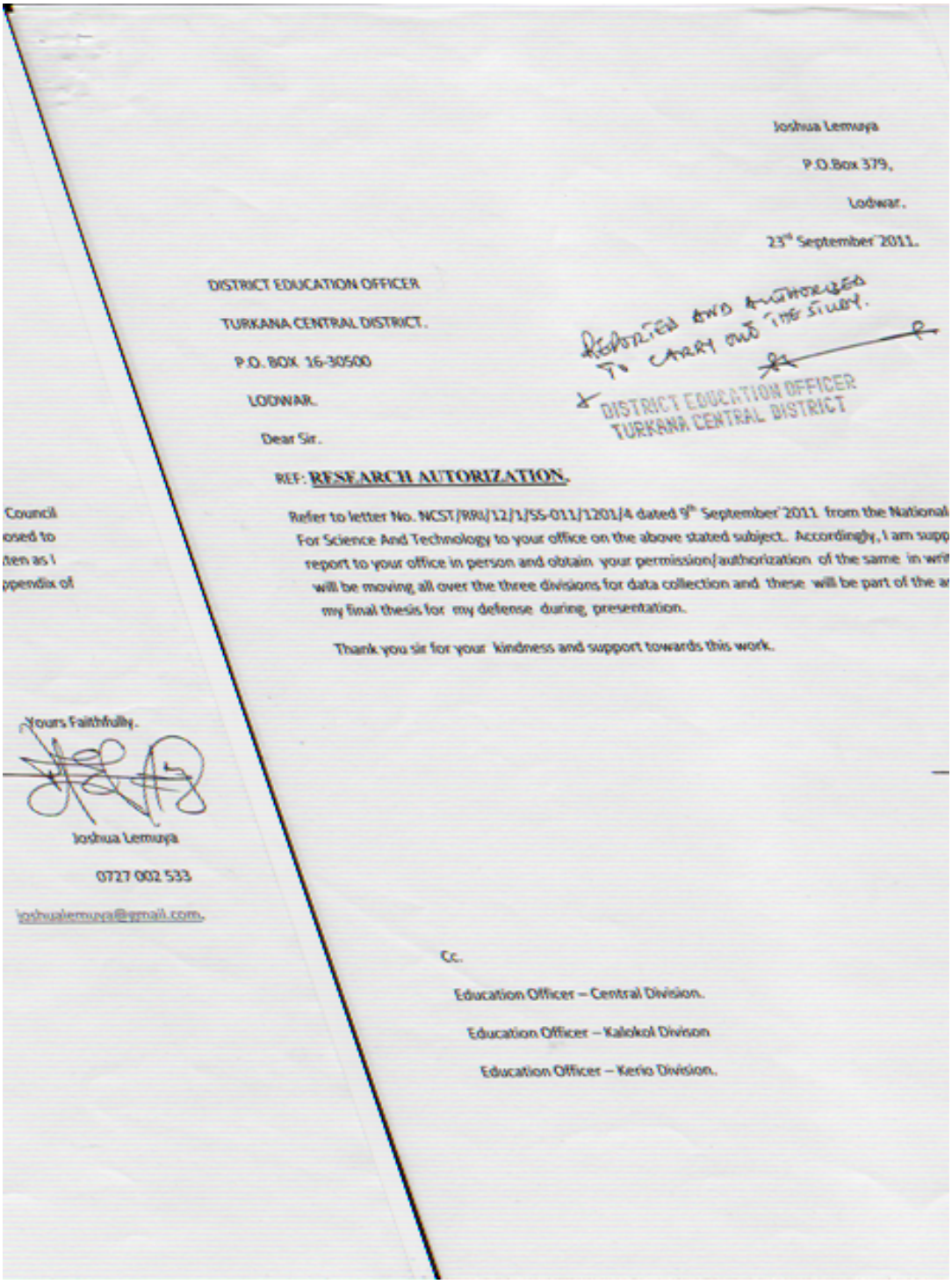
Any assistance accorded to him will be highly appreciated.

DEAN

DR. J. KWONYIKE
DEAN, SCHOOL OF HUMAN RESOURCE DEVELOPMENT

mam Resource

roduces a Thesis.
on the Turkana



Joshua Lemuya

P.O.Box 379,

Lodwar.

23rd September 2011.

DISTRICT EDUCATION OFFICER

TURKANA CENTRAL DISTRICT.

P.O. BOX 16-30500

LODWAR.

Dear Sir.

REPORTED AND AUTHORIZED TO CARRY OUT THE STUDY.

DISTRICT EDUCATION OFFICER
TURKANA CENTRAL DISTRICT

REF: **RESEARCH AUTORIZATION.**

Refer to letter No. NCST/RRI/12/1/SS-011/1201/4 dated 9th September 2011 from the National
For Science And Technology to your office on the above stated subject. Accordingly, I am supp
report to your office in person and obtain your permission/authorization of the same in writ
will be moving all over the three divisions for data collection and these will be part of the a
my final thesis for my defense during presentation.

Thank you sir for your kindness and support towards this work.

Council
osed to
tem as I
ppendix of

Yours Faithfully.

Joshua Lemuya

0727 002 533

joshualemuya@gmail.com.

Cc.

Education Officer – Central Division.

Education Officer – Kalokol Division

Education Officer – Kerio Division.

APPENDIX VIII: SUPERVISORS AT NAKABARAN WATER POINT IN LODWAR



Prof Mulongo and Mr. Onganya (Supervisors) visiting a duba water pump at Nakabaran village in Lodwar, Turkana County.



Nakwei, in Nawoitorong ward Vast and dry land with shrubs but rich in black oil, minerals and supports livelihoods

APPENDIX IX: RELIEF FOOD DISTRIBUTION AT NADIPOE VILLAGE



Relief food distribution after a local baraza, local structures/ system of leadership is present.



Turkana women involve in business venture to enhance a sustainable development.

APPENDIX X: MR JOSHUA LEMUYA CONDUCTING FOCUSED GROUP DISCUSSION



Joshua Lemuya addressing the focused group discussion to ascertain the impact of emerging socio- economic changes in Turkana region.



Prof. Mulongo and Bishop Onganya at River Kawalase discussing how its water can be harnessed to support an irrigation scheme which will help in alleviating poverty brought about by the emerging socio-economic changes.

APPENDIX XI: MY SUPERVISOR (PROF MULONGO) AT A CURIO IN LODWAR



Prof Mulongo at a Tourism and curio shop that can be financed so as to provide jobs to the youth hence creating a sustainable development.



APPENDIX X11: TIME PLAN

THESIS DEVELOPMENT WORK PLAN.

ACTIVITY	PERIOD	DURATION
i. Formulation Statement of the Problem	Nov` 2010 – Feb` 2011	1 Month
ii. Literature Search	Nov` 2010 – June`2011	1 Month
iii. Proposal Writing	Jan`2011 – April`2011	2 Months
iv. Pilot Study	April`2011 – May`2011	1 Months
v. Proposal Defense & Correction	11th June`2011	1 Month
vi. Research Authorization	15th June – 15th July`2011	1 Month
vii. Data Collection	8thAugust–20thOctober`2011	3 Months
viii. Data Cleaning & Coding	October `2011	1 Month
ix. Data Analysis & Report writing	11th Jan` – 11th March` 2012	3 Months
x. Report Writing	15th April - 15th August`2012	
xi. Presentation of Findings/Defense	12th November`2013	1 Months
xii.		13 Month

APPENDIX XIII: BUDGET

Budget is in Kshs

Particulars	No. (Qnty)	Cost per unit	Total Cost	Total Value
Personal Emoluments	1	20,000	20,000	20,000

Data Analysis	1	10,000	10,000	10,000
Expendable Supplies and equipment. i.e pens, flash disks, printing papers, rulers, rubbers, notebooks,	15	5,000	5,000	5,000
Research Assistants	6	5,000	30,000	30,000
Fuel/Gas	3	6,000	18,000	18,000
Printing & Photocopying	15	500	7500	7,500
Miscellaneous				18,100
				108,600