NATURAL RESOURCE EXPLOITATION AND PEOPLE'S LIVELIHOOD: A STUDY OF OIL EXPLOITATION IN LOKICHAR BASIN, TURKANA COUNTY, KENYA

BY

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DECLARATION

Declaration by the Candidate

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DEDICATION

I dedicate this work to my beloved parents: Teresa Nachiyo Areman and the late William Areman, who have always seen me through in life and whose efforts I am where I am today. In a special way, I also wish to dedicate this work to my beloved Sisters and brother, the Late Rosa Areman, the Late Joan Areman and the late Churhill Areman, who always guided me and inspired me in their work.

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To all, who offered me assistance, God bless you abundantly.

ABSTRACT

The role played by natural resources in a country's growth cannot be underestimated. Globally, countries endowed with natural resources have seen tremendous development as evidenced from the various socio-economic activities taking place. This however tends to vary from the numerous strategies employed by each country. Unlike the case with developed countries, third world countries seem to wait until full exploitation has taken place before integrating with livelihood transformation. There are always high expectations from the host community that oil exploitation will translate to better living standards. It is against this background that this study sought to examine how systematic transformation of livelihood can be achieved during the initial stages of natural resource exploitation in Lokichar Basin. The study's specific objectives were to: examine the sources of livelihood of the people before oil exploitation; assess the local community participation in oil exploitation in Lokichar Basin; evaluate the contribution of Oil exploitation to the people's livelihood and analyze the obstacles people face in eking livelihood during oil exploitation in Lokichar Basin. The study was anchored on three theories: Political ecology theory, Malthusian theory and Institutional theory and adopted pragmatist philosophical paradigm. Sequential explanatory mixed methods research design was adopted with a target population of 226,000 people in Lokichar Basin. Using Taro Yamane formula, a sample size of 277 respondents was used for this study. The sampling techniques adopted were cluster and purposive sampling. The instruments of data collection were: Questionnaires, interview schedules, Focus group discussions and document analysis. Data was analysed with the help of SPSS version 23: Quantitative data was analyzed through descriptive statistics such as frequencies and percentages which were then presented using charts and tables. Inferential statistics employed was the Pearson Coefficient correlation. Qualitative data was analyzed descriptively in the form of narratives put into thematic areas in line with the objectives of the study. The study found out that the primary source of livelihood for the local community is pastoralism as alluded by 65% of the respondents. However, pastoralism is under the threat of extinction due to competition for land use. It also emerged from the study that there was good or optimal involvement of the local communities on activities of the Extractive industries as indicated by 54.6% of the respondents. As per the findings of the study, a number of benefits have been accrued namely: Improved well-being manifested through job opportunities, infrastructural development, availability of social amenities, education scholarships, micro-finance schemes. In addition, political patronage, elitism, conflicts and environmental degradation were found as obstacles experienced by the local community in eking livelihood during Oil exploitation. At the level of significance of 0.055 and alpha level of 0.05, the (Pearson Coefficient correlation) p-value at 0.184, it was evident that there was a positive significant relationship between oil exploitation and livelihood of people. Hence, this study concluded that oil exploitation has potency of bringing about a positive transformation on the livelihoods of the local residents of Lokichar Basin. The study recommended investment in livelihood diversification strategies, people-centred oil exploitation with efficient engagement of the local community in the entire process of oil exploitation, proper revenue management, local community expectations management, transparency and efficient legal framework for enhanced livelihood. The findings of the study would greatly help in the development of policies addressing problems associated with oil exploitation; inform appropriate interventions suitable for sustainable livelihood as well as management of high expectations among people living in Oil exploitation zones of Turkana County.

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ACCRONYMS (ABBREVIATIONS)

ASAL	- Arid and Semi-Arid Lands
BBC	- British Broadcasting Corporation
CBNRM	- Community-Based Natural Resource Management
Co.	- Company
CSOs	- Community Based Organization
CSR	- Corporate Social Responsibility
DFID	- Department for International Development
DPR	- Department of Petroleum Resources
EIs	- Extractive Industries
FMPR	- Federal Ministry of Petroleum Resources
GOK	- Government of Kenya
HDI	- Human Development Index
IOCs	- International Oil Companies
MPE	- Ministry of Petroleum and Energy
NCS	- Norwegian Continental Shelf
NNPC	- Nigerian National Petroleum Corporation
NPD	- Norwegian Petroleum Directorate
PSAs	- Production Sharing Agreements
PSC	- Production Sharing Contract
SLF	- Sustainable Livelihood Framework
TCG	- Turkana County Government
TNC	- Transnational Companies
UNDP	- United Nations Development Program

OPERATIONAL DEFINITION OF TERMS

Community- A group of people living in the same locality and sharing the same government, same social ties and share common perspectives.

County- Administrative division in a country. For example, Turkana County in Kenya.

Livelihood- Capabilities, assets and activities required for a means of living. It also includes the opportunities that society affords through the arrangement society makes for education, health care among others, which influence the individual's freedom to live a better life.

Natural Resource- Assets provided by nature.

Oil industry- All activities connected with oil extraction from pre-licensing to exploration through refinery to selling. This comprises upstream activities which are complemented by midstream activities.

Resource Management- This is the process of using the resources of an organization in the most efficient way possible, that is, the efficient and effective deployment of an organization's resources when and where they are needed.

Turkana- This is a tribe found in the northern part of Kenya; Turkana is the name of a county in Kenya and it is also the language spoken by the Turkana people of Kenya.

Natural Resource Exploitation- Efforts to locate deposits of mineral resources to be used for economic growth to improve livelihood.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

The chapter articulates key issues that lay the foundation to the study. They include: Background information to the study, statement of the problem, study objectives, research questions, significance of the study, justification of the study and scope and delimitation of the study that lay the foundation of this study.

1.2 Background to the Study

The relationship between natural resources and people's livelihood cannot be underestimated. Natural resources are known to accelerate economic development because of the potential of earning foreign exchange through export and also due to the fact that natural resource rents can be used to boost capital investment (Asamoah, 2011). Globally, Norway is seen as model for the success story of oil exploration and its positive impact on sustainable livelihood. Their ability to avoid the resource curse has been attributed to a number of reasons and thus turned its oil into a blessing and with its oil deposits (Taylor, 2011). Norway has become different from the other Nordic countries and is now the country with an alternative model of economic and social development.

Norway has turned its mineral wealth (Oil) a blessing largely due to the famous ten commandments of Oil in Norway, which have been a guide for the better management of Oil revenue (Sonia, 2017). The 10 Oil Commandments are items in a declaration of principles underpinning Norwegian oil policy submitted by the Standing Committee on Industry in a Storting White Paper dated 14 June 1971. These ten oil commandments are:

1. That National supervision and control must be ensured for all operations on the Norwegian Continental Shelf (NCS)
2. That the petroleum discoveries must be exploited in a manner designed to ensure maximum independence for Norway in terms of reliance on others for supply of crude oil.
3. That new business activity must be developed, based on petroleum.
4. That the development of an oil industry must take place with necessary consideration for existing commercial activity, as well as protection of nature and the environment.
5. That Flaring of exploitable gas on the NCS must not be accepted except during brief periods of testing.
6. That Petroleum from the NCS must as a general rule be landed in Norway, except in those cases where socio-political considerations dictate a different solution.
7. That the State involves itself at all reasonable levels, contributes to coordinating Norwegian interests within the Norwegian petroleum industry, and to developing an integrated Norwegian oil community with both national and international objectives.
8. That a state-owned oil company be established to safeguard the State's commercial interests, and to pursue expedient cooperation with domestic and foreign oil stakeholders.
9. That a pattern of activities must be selected north of the 62nd parallel which reflects the special socio-political conditions prevailing in that part of the country.

10. That Norwegian petroleum discoveries could present new tasks to Norway's foreign policy.

Norwegian success is attributed to the ability to put in place certain mechanisms and institutions at the initial stages: Norway was already a functioning democracy at the discovery of oil in 1969 (Torvik, 2011). Its political system would be described as a parliamentary democracy in the context of a constitutional monarchy. With its mature democracy, Norway has enabled the media to actively evaluate and even comment upon the working of the system and evaluate the government policies and performance of the leaders in the government.

Large Norwegian petroleum discoveries necessitated formulation of policies to regulate the management of oil resource. Among these policies is the birth of the Oil for Development policy which has been a catalyst of development (Taylor, 2011). The Norwegian parliament unanimously adopted the following 10 basic principles in June 1972. These principles, famously known as the 'Ten Commandments" of Oil, governed oil exploitation and thus led to improved livelihood based on oil wealth. According to the Canadian Association of Petroleum Producers (CAPP), oil and gas industry accounts for 500,000 jobs across Canada, making it the largest single private sector in the country (CAPP, 2012). The favourable repercussions of sizable oil and gas projects led to some rural and remote Canadian communities to live a minimum descent life. Hence, the Oil industry in Canada led to improved livelihood of the people.

Many African countries are blessed with oil that has the potential to transform their economies (Brunnschweiler, 2010). Africa is therefore rich in natural resources that ought to transform the livelihoods of her people. According to Oguduvwe (2013), natural resources are the foundations from which rural poor people in developing countries can overcome poverty. This is owing to the fact that natural resources

(Minerals, Timber, and Fisheries, among others) contribute directly to income, employment and fiscal revenues and also account for a large share of economic output in the livelihoods of people in many developing countries. Gabon, one among African countries endowed with Oil, saw economic growth due to petroleum development and it has managed to diminish poverty and hence built a sustainable model of development.

By and large, natural resources, especially Oil, endowed to developing countries have often proved to be a curse than a blessing especially to the majority of the citizens in these African countries. According to Sonia (2017), natural resource wealth (Oil wealth) in many developing countries turns out to be a curse. This is manifested in weak states institutions, poor governance and high levels of corruption. This is attributed to the leadership crisis facing many countries on the African continent (Ross, 2012). Oil has been a motivation for civil wars in Africa as well as a ground for corruption. Consequently, a number of African nations such as Congo, Angola, Libya and Algeria among others, endowed with Oil have been able to realize great Human Development Index (HDI) as a result of oil endowments.

Africa is arguably the continent most endowed with natural resources, and more than any other continent, the livelihoods of African rural populations are heavily dependent on natural resources. The livelihoods also affect the status of the natural resources in many ways such as depletion of natural resources to support sustainable livelihood (Murphree, 2008). The history of the upstream oil and gas industry in Sub-Saharan Africa can be traced back to 1908 when the German firm Nigerian Bitumen Corporation began exploration in Western Nigeria: In the 1950s, oil was discovered in commercial quantities in Nigeria. Since the early 2000s, Angola has also emerged as a significant oil producer (Baumuller, 2011). Other oil producers in Sub-Saharan Africa include

Sudan, Equatorial Guinea, the Democratic Republic of Congo (DRC), Gabon, South Africa, Chad, Cameroon, Côte d'Ivoire, the Republic of Congo, Mauritania and Ghana.

Africa remains one of the most vulnerable continents with deepening poverty levels and worrying trends of degradation of natural resources. This "paradox of plenty" arises from a combination of multiple factors that have been the subject of an impressive scientific, academic and development literature. Africa has provided many examples where greed for natural resources such as minerals or oil has led to civil war, political instability, and corruption. Instead of serving as inputs, natural resources have served as a catalyst of internal conflict in Africa. The prolonged internal conflicts in Liberia, Sierra Leone, and the Democratic Republic of Congo who all have rich resources can be examples to back up our hypothesis (Ross, 2012).

As far as Africa is concerned, out of all the components of governance: a non-democratic political regime and political instability were crucial obstacles to economic growth despite her richness with natural resources. And these in turn were deeply related with natural resources (Yates, 2012). Non-democratic regime as seen in many developing countries has led to personal abuse of public assets, corruption, and rent seeking which in turn hinders sound governance of natural resources for economic growth in Africa.

On the other hand, social crashes such as riots, rebellions, and internal conflicts that often lead to civil wars make socio-political environments detrimental to economic development. A civil war, in particular brings comprehensive and fatal impacts on economic growth, including the destruction of both human and physical capital, the disruption of economic transactions, the distortion of resource allocation by economic agents and higher uncertainty all over the economy.

This study made a brief comparison of impact of Oil exploitation in Norway and Nigeria to help Kenya, a new entrant in the Oil industry to be able to learn practical lessons in order to make Oil exploration a blessing and catalyst of sustainable development. Although Norway and Nigeria differ in terms of their political, social and economic diversity, the two countries still share a common thread in terms of the discovery of oil, production capacity and the economy driven by the oil wealth. Therefore, the two countries presented an excellent specimen for the study because although they have both utilised the main principle aspects that influence the manner in which a nation manages its natural resources, they have performed differently in their Oil industry. Norway then becomes a model for Kenya to succeed in the Oil industry and thus make Oil a catalyst for sustainable development.

The local residents of Turkana County have a lot of expectations of positive transformation of their livelihood as a result of the Oil found in their County. This study strived to look at how Oil exploration in Lokichar Basin will bring this dream to fruition and thus challenge the narrative of natural resource abundance in Africa being a curse. According to Yates (2012), many developing countries face the challenge of managing the surge of resource revenue for sustainable livelihood of their citizens. This is manifested in poor governance, which is rampant in developing countries. Hence, it is important to deal with the managerial challenge that oil discovery has posed to many developing countries that have failed to translate the economic gains of oil to improve the quality of life for their citizens.

Petroleum Exploration in Kenya began in the 1950s within the Lamu Basin. It was until 2012 when the first commercially viable oil discovery was made in the Tertiary rift, followed by significant gas discoveries in offshore Lamu basin. To date, over 86 wells have been drilled with a majority within the Tertiary Rift where an estimate of billions

of barrels of crude oil reserves have been encountered in the Lokichar Basin by Tullow Oil Co. and its partners.

The discovery of oil in Lokichar Basin, Turkana County, in 2012 immediately provided an extra boost to Kenya's already growing and diverse economy and its position as East Africa's strategic transport and communications hub (BBC News, March 2012). In Turkana, expectations are high that oil will bring fast-paced economic growth and development. Managing these expectations according to both the long timeframe for oil development and the limitations of what are still relatively small oil discoveries, is regarded as one of the main challenges facing the Kenyan government and international oil companies in relation to local communities.

Based on the need to involve local communities in the management of natural resources and in this case oil in Lokichar Basin, this study proposed the need for Community-based natural resource management (CBNRM). CBNRM is fundamentally a reformist undertaking premised on changing institutional arrangements governing lands and natural resources. Shifting rights and tenure over resources from the hands of central state bureaucratic agencies to local communities involves decentralization of resource governance in one form or another.

This study considered Community Based Natural resource management (CBNRM) as a necessary tool for sustainability of the natural resource as well as a benefit sharing mechanism so that the local residents would also enjoy the benefits of oil exploration (oil revenue) from the oil find in their area.

1.3 Statement of the Problem

Ordinarily, abundant natural resource wealth, especially Oil, should enhance a country's economic and social development and thus improve the livelihood of the

people. The tendency has been that of waiting for full production to accrue benefits. This study was concerned with how the livelihood of the host community can be transformed from the initial stage of oil exploration moving towards full utilization of the oil wealth.

Availability and dependency on Natural resources especially Oil has always resulted to mixed feelings: On one hand, abundant natural resource wealth has been a blessing, and this has been the case with countries like Norway (Ross, 2012). The proponents of oil-led development hold that oil-rich countries can base their development on this resource (Lederman, 2007). They point out to the potential benefits in the form of enhanced economic growth, increased government revenues to finance poverty alleviation, the creation of job opportunities, the transfer of technology, improvement of infrastructure, and development of other related industries.

On the other hand, natural resource abundance has proved to be a curse in the form of well known "Dutch Disease" and thus natural resources have been the genesis of many upheavals in developing countries such as Nigeria (Pang, 2013). This implies that Oil resource wealth have instead become associated with weak state institutions, exceptionally poor governance and high levels of corruption, a culture of rent-seeking, often devastating and slower than expected economic growth, which have become barriers to economic diversification.

This phenomenon of "Dutch Disease" was initially identified after the discovery of natural gas in Holland and for this reason it has also been given the name "Dutch Disease" owing to its origin (Ross, 2012). It takes the form of a "political curse" and an economic "curse". Political curse is characterized by lack of free and fair elections, lack of political participation by citizens and ineffective governance of natural resources in terms of lack of accountability and lack of transparency. Political curse has

been manifested in Lokichar Basin through lack of effective community engagement as well as the common practice of elitism whereby elites from the host community claim to be the voice of the community. Economic resource curse describes a situation whereby exploitation of a natural resource leads to an export boom that distorts the real exchange rate generating domestic inflation and difficulties in exporting other products (Yates, 2012). In the case of Lokichar Basin, economic curse was manifested in the threat to pastoralism due to shock and stress associated with Oil exploration in the form of loss of grazing land for establishment of Oil camps.

However, the Dutch Disease also applies today to the consequences of any sudden increase in foreign exchange availability from a natural resource. The sudden increase in foreign exchange as a result of an appreciation in the value of oil export can lead to an uncontrollable appreciation of the local currency. This is manifested in economic disequilibrium, degradation of the environment, conflicts and high levels of poverty. Poverty remains widespread in Africa despite the abundance of natural resources (Oil) in the continent. This is attributed to corruption and poor governance of resource wealth, whereby oil wealth remains in the hands of those governing (Politicians), business people, Transnational Companies and elites while host communities languish in poverty.

Many African countries that are rich in natural resource are suffering from weak governance. This is exacerbated by lack of transparency and accountability among governments and Transnational Corporations (TNC) that are directly involved in the oil and mineral sector. It is against this background that this study sought to investigate whether Oil, a vital natural resource, in Lokichar Basin, Turkana County can bring about sustainable livelihoods with good governance of the resource wealth.

1.4 Study Objectives

The study was guided by the following research objectives:

(i) To examine the people's sources of livelihood before oil exploitation in Lokichar Basin

(ii) To assess the local community participation in oil exploitation in Lokichar Basin

(iii) To evaluate the contribution of oil exploitation to people's livelihood in Lokichar Basin

(iv) To analyse the obstacles people face in eking their livelihood during oil exploitation in Lokichar Basin

1.5 Research Questions

The study attempted to answer the following research questions:

(i) What have been the sources of livelihood of the people of Lokichar Basin before oil exploitation?

(ii) To what extent is the local community involved in oil exploitation in Lokichar Basin?

(iii) How has the oil exploitation in Lokichar Basin contributed to the livelihood of the local community?

(iv) What are the obstacles people face in eking their livelihood during oil exploitation in Lokichar Basin?

1.6 Justification of the Study

There are essentially two schools of thought on natural resource exploitation. The first school of thought sees exploitation of natural resources as the key to development because it causes massive changes which provide the impetus to economic growth. The

second school of thought believes that exploitation of natural resources does not always result in the positive economic growth and development of the resource regions but rather results in a "curse". The concern in this study was so much on finding out the extent to which oil exploitation in Lokichar Basin has transformed the livelihood of the people of the host communities where oil exploration is taking place. This then translates to managerial challenge faced by many developing countries endowed with Oil resource.

The study was chosen due to the desire to enhance the responsible management of petroleum resources given the rampant cases of abuse in the management of natural resource endowments in most resource rich countries. Any country in the world intends to make the best use of its natural resource base revenues to the benefits of its people and whole society. After recently discovering oil in Turkana County, Kenya equally has given a mixed bag of feelings amongst its citizens in light of expected huge oil revenues in the recent future. Therefore, this intellectual inquiry is not only timely, but also substantive to Kenya as a new Oil province.

This study contributes useful and practical information for better planning, sustainable development and management of oil resource for the benefit of the State and its present and future generations. It is a relevant and an important tool for policy makers, legislators, administrators, development practitioners, oil companies (and other participants in the industry) and professionals who are directly and indirectly involved in the management of Oil resource in Kenya.

Several studies carried out have been based on oil exploitation vis-à-vis fishing (Like in Ghana) or oil exploitation vis-à-vis hunting like in the Amazon and Ecuador or oil exploration vis-à-vis farming like in Uganda. Little has been done on how oil exploitation impacts on pastoralism, which concerns this study. Therefore, this study

was intended to come up with appropriate interventions on how pastoral communities can adapt to the shocks and stress associated with oil exploration against pastoral livelihoods.

1.7 Significance of the Study

As countries find new grounds and discover much needed natural resources, it is expected that their economies would receive a boost which will translate into better living conditions for their citizens. This study looked at how oil exploitation can contribute to sustainable livelihood of the people of Lokichar Basin, especially in improving their quality of life.

This study adds to the existing literature on natural resource management by taking an in-depth look at how local residents would be catered for differently from how communities in other natural resource zones have been treated. The study explored the strengths and weaknesses of institutions of natural resource management in Kenya so as ensure a strong institutional framework for proper natural resource management.

The findings of this study help the Government of Kenya as well as the County Government of Turkana on how best to manage natural resource wealth for the benefit of all in the community and consequently bring to fruition the 'trickle-down effect' whereby all enjoy the benefits of the natural resource wealth. The study also provides room for development of policies to address problems associated with oil exploitation among people living in the oil exploitation zones.

The findings of this study aid the implementation of development initiatives by extractive industries as well as the government to be tailored to the needs of the host communities and thus embracing a people-centred approach that answers the real needs of the people. The local residents of Lokichar Basin expect that the revenue from oil

(extractive industries) will be a solution to poverty and that especially oil exploitation in Lokichar Basin would lead them to attain sustainable livelihood. It is this dream that the findings of this study sought to bring forward and hence address the expectations of the local residents of Turkana County.

1.8 Scope and Delimitation of the Study

According to Kasomo (2006), scope and delimitation of study indicates the boundaries of the study in terms of content and geographical spread. This study basically considered the expectations of the host community in regard to the oil discovery bringing about better standards of living to the locals. Hence the study was concerned as to the extent to which the expectations of the local community is likely to be met so as to conclude that Oil exploitation can lead to sustainable livelihood and thus indeed a blessing to those endowed with natural resource wealth. Turkana County has got seven Sub-Counties but this study was carried out in Lokichar Basin which includes Turkana South and Turkana East Sub-Counties. The researcher sampled two locations in each of the targeted sub-counties.

The researcher limited the study to the two sub-counties putting into consideration the time and funds involved as a great challenge. The distances between the two sub-counties are big and this required days of travelling as well as money for travel. In light of this the researcher got support for fuel to cover these distances through the partnership of TORCAIRE and the Catholic Diocese of Lodwar.

The researcher envisaged suspicion from the Oil representatives who were likely to consider that the researcher was looking for information for other purposes other than academics. The researcher then had to make it known to the respective oil companies that the research was purely for academic purposes. This clarity was supported by the research permit given by NACOSTI.

The local residents exhibited unwillingness to participate in the research unless paid in kind because of what they have been used to with the experience of several NGOs that carry out research in Turkana County. The researcher got the help of the young elites from the host communities who were research assistants and thus helped to make the respondents understand that there was no money to pay them.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter presents a synthesis of literature related to the study. The review is based on past researches, reference books, reports, journals, newspapers and internet sources among others. The chapter entailed literature on natural resource management; people's source of livelihood before oil exploitation, local community participation, contribution of oil exploitation to sustainable livelihood and obstacles faced in oil exploitation.

2.2 The Concept of Natural Resources

Natural resources are those assets that are provided by nature. According to Allcott (2011), there are three types of natural resources: Depletable resources, Renewable resources and expendable resources.

2.2.1 Depletable or exhaustible resources

Depletable resources, also known as exhaustible resources, are resources that deplete with usage of the particular resource and cannot be replenished within a useful time. Such resources include crude oil and natural gas. They do not grow or otherwise renew themselves over time. They exist in finite quantities so that every unit consumed today reduces the amount available for future consumption. Turkana County has a lot of natural resources that have not been effectively utilized (GOK/UNICEF WASH PROGRAMME, 2013). This under -utilization is attributed to the lack of know-how and appropriate machines for extraction. Turkana County shares almost similar geological formations and structure with the neighbouring countries: Uganda, Ethiopia and Sudan. This is so because the structural evolution, tectonics and volcanism which culminated in the present rock types and structures took place almost at the same span of time.

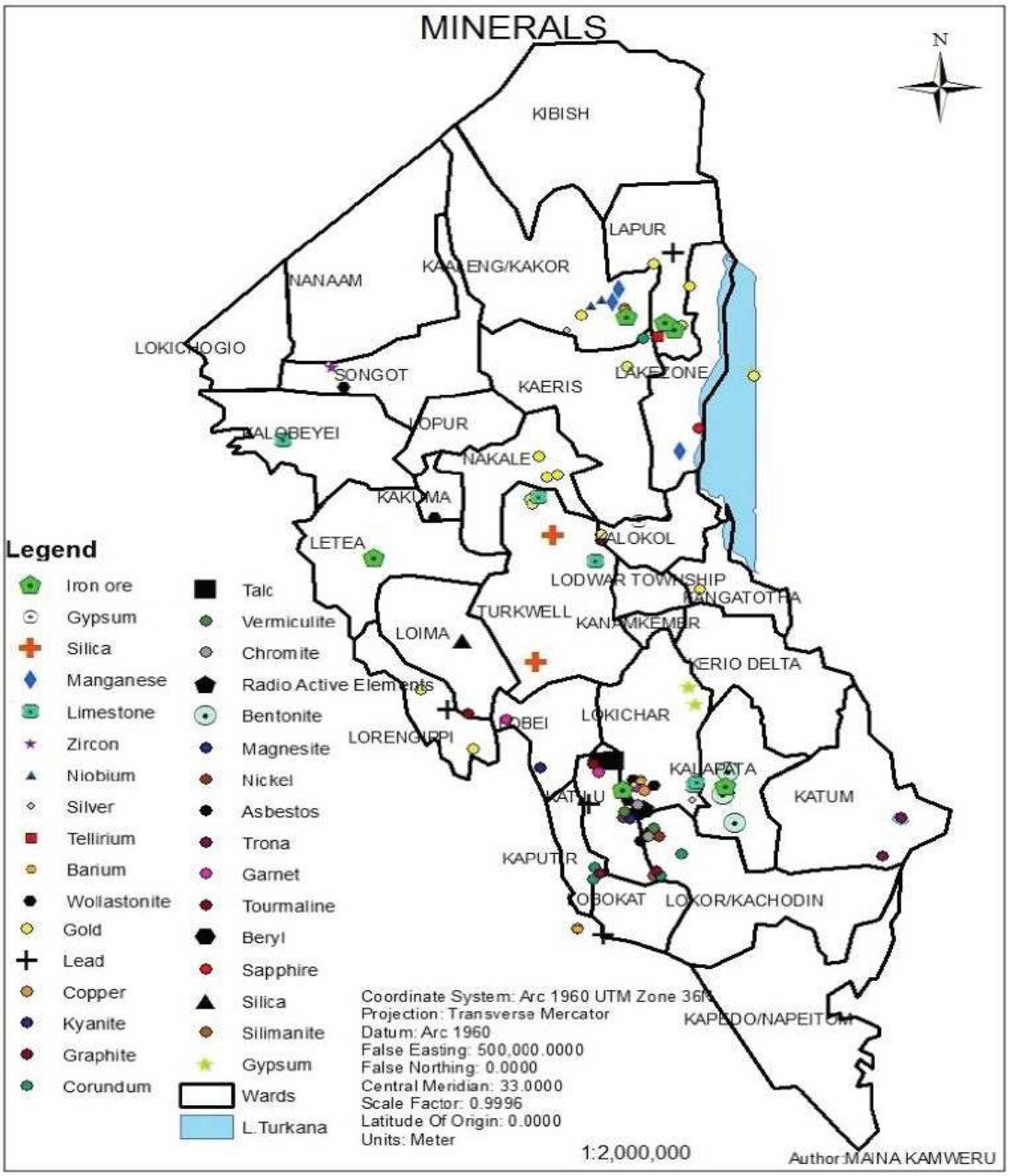

Figure 2.1: Distribution of Minerals in Turkana County
Source: Turkana County Government Report 2015

It is worth to note that Turkana County is endowed with numerous mineral resources as seen in Figure 2.1. These resources are spread in various corners of the County and only need proper exploitation to bring about a better livelihood for the local community. Turkana County is traversed by the extensive Eastern African Rift System, which equally traverses through Tanzania and Ethiopia on the east and through Uganda on the west. It is within this structure and deep basins of sedimentary deposits outside it that

some prospects of oil and gas deposits are manifested. The cratonic mineral deposits bordered by this huge rift structure take the share of many types of metallic and non-metallic mineral deposits and materials. This displays how Turkana land is potential and rich in resources which if well utilized can better the living standards of the community.

2.2.2 Renewable resources

These are resources whose stocks recharge by itself within useful time especially if they and when they are not over-exploited. One example of such resources includes forests. Renewable resources increase or otherwise renew themselves over a short period of time but then the time frame must be economically relevant given the fact that some resources may be renewed in principle but not in practice. However, renewable resources are exhaustible if they are over-exploited. Forests are under threat of depletion in Turkana County because of their varied use in the local communities. Turkana County has about 4.06% forest cover. These forests are found on Loima hills, Mogila hills, Songot hills, Pelekech Hills, Lorionotum, and Lokwanamur. (GOK/UNICEF WASH PROGRAMME, 2013). Forests provide building materials, forage for the animals, shelter for both animals and birds and also attracts rain which is useful for the growth of vegetation. From the forests also come charcoal and firewood for cooking. This is an important natural resource that needs to be utilized for sustainable livelihoods. However, the Kenya Forests Services deterrents have saved the forest covers from depletion.

There are Elephants found at the South Turkana National Reserve. Leopards and Hyenas are found on the Moru Eris Hills whereas lions, ostriches, gazelles' elephants are found in Kibish Sub-county. Tortoises are found in Todonyang area. Survey done

in Loima identified 87 species of avifauna, 48 in Aminit forest above 2,050 m and the rest in Acacia wetland at 800 – 2,050 m (Turkana County Government Report, 2015).

Lake Turkana is an important site for water birds with up to 220,000 congregants having been recorded at one time and 84 water bird species, including 34 Palearctic migrants, known from the lake according to Nature Kenya. Other aquatic animals in Lake Turkana include Hippopotamus amphibious, Crocodiles and an endemic freshwater turtle (GOK/UNICEF WASH PROGRAMME, 2013).

Wildlife is a resource that would have changed the living standards of the Turkana Community but this has never been realised and thus casting doubt on whether the oil exploitation will bring the desired positive change. The South Turkana National Reserve found in Turkana has since been managed from Kitale and revenue collected goes to the National government, which to the local community has never been a life changer. Plans need to be put in place to hand it over to the Turkana County Government to build the confidence of the local community in proper use of revenue collected from this natural resource (Turkana County Government Report, 2015).

2.2.3 Expendable resources

They are so called because the use in one period does not affect the usage in future periods. Such resources will include wind, solar energy or even grains. One major feature of such resources is that they are not competed for use since they are not exhaustible and are readily available to all. Turkana County enjoys sunlight for an

average of 10 hours daily. This is an opportunity that is already being tapped into, albeit on a relatively small scale.

Figure 2.2: Solar harvesting project at Lake Turkana for green energy
Source: Vision 2030 Manual

The sunlight in Turkana County can be tapped for solar energy as seen in Figure 2.1 so as to be used to better the living standards of the people. The radiant heat and light have been harnessed from the sun as both electrical and thermal form. Electricity generated can be used directly or can be stored in batteries for future use. This is a great resource which, if well harnessed is able to support the Turkana Community by making good use of solar energy since the area is not connected to the national grid.

In the case of storing the power, a charge controller is necessary to protect the battery from damage as a result of overcharging or undercharging (GOK/UNICEF WASH PROGRAMME, 2013). Global Horizontal Irradiance (GHI) and Daily Normal Irradiance (DNI) data acquired from 34 metrological stations over a period of 3 years was used to develop a solar atlas for the country. GHI is more relevant when assessing PV potential and an average value that exceeds 5kWh/m2 indicates good solar potential.

It is evident from the national atlas that Turkana County receives between 4 -6kwh/m^2 of daily solar radiation and therefore has a vast potential for solar energy production (Turkana County Government Report, 2015)

Wind Energy

A survey done by Economic Consulting Associates in 2014 revealed that Northern parts of Turkana County and some parts bordering Lake Turkana to the south, are good energy zones since wind speeds experienced are in excess of 5m/s. These sites include: Naduat, Kokuro, Kalokol, Oropoi, Kataboi, Longech Island and Lowarengak. Turkana community stands a high chance of improving their livelihoods if these resources could be utilized effectively.

Wind speeds above 3.5m/s are enough to spin wind turbines, with speeds above 6m/s being the most ideal for firm electricity generation (WASH/UNICEF PROGRAMME, 2013). Most parts of Turkana County can be categorized as moderate wind energy zones since wind speeds are between 3-5m/s. It is worth noting that Solar and Wind energy has been used to get water to the residents of Turkana County. This has been with the efforts of both Turkana County Government and NGOs and FBOs in Turkana, the larger help coming from the Catholic Diocese of Lodwar,

The main sources of water in rural parts Turkana County are unprotected dug wells, streams and boreholes. About 61% of rural households in Turkana Count use unimproved water sources with majority relying on unprotected wells and streams (GOK/ UNICEF WASH PROGRAMME, 2013). This situation puts the pastoral communities in Turkana County at a high risk of suffering from water borne diseases.

Turkana County has rich aquifers at Lotikipi, Nakalale and Napuu as seen in Figure 2.3. These aquifers have been established to provide water for the entire Turkana

County as well as the whole nation of Kenya for more that seventy years (Turkana County Government Report, 2015). Napuu, for example, with the latter having been established as a reliable source of water for the growing population in Lodwar. Surface water from the seasonal rivers is accessed by the community during the rainy season, and also accessed by digging holes in the sandy areas of riverbed to access water during the dry season.

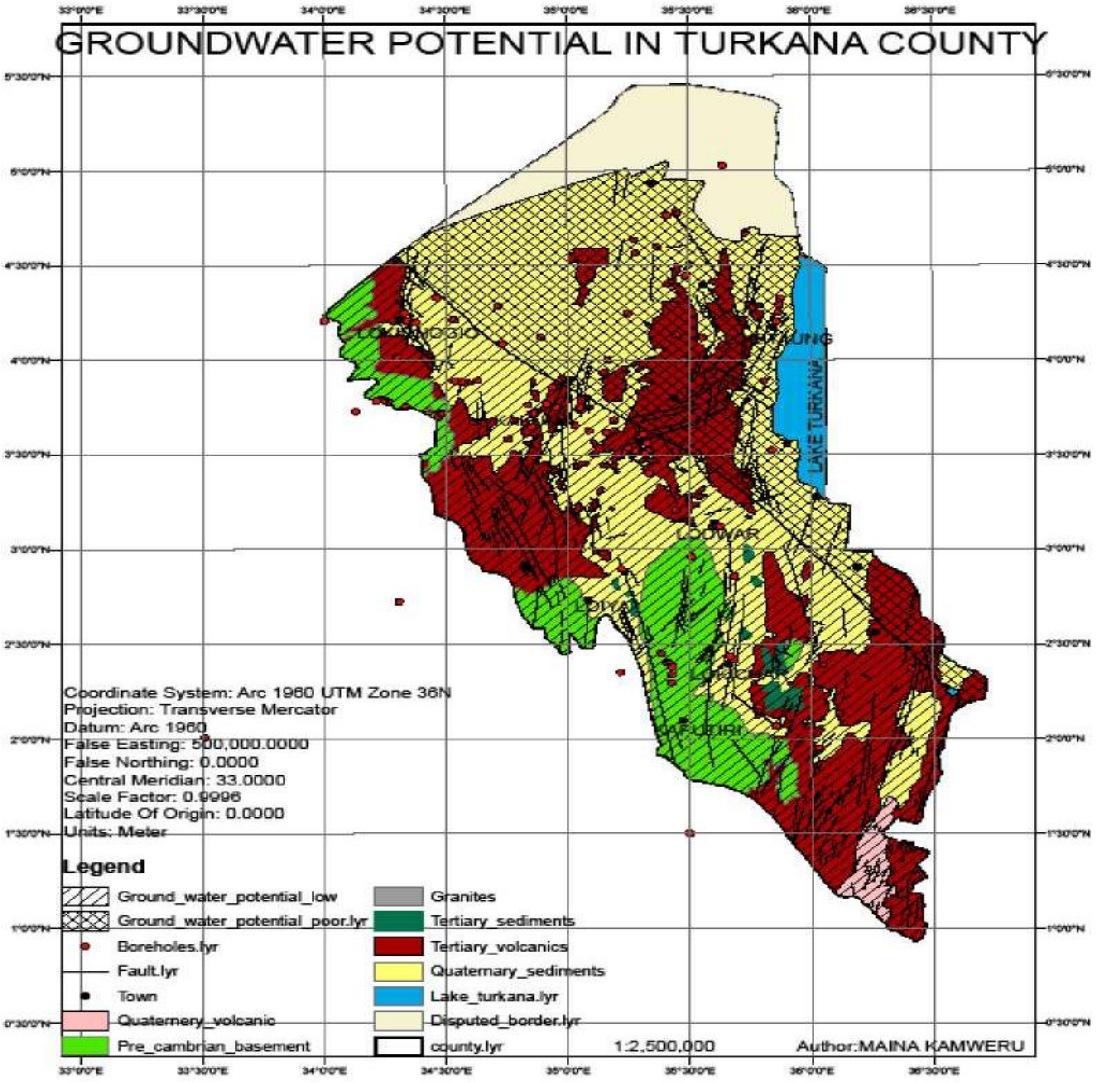

Figure 2.3: Ground Water Potential in Turkana County
Source: Turkana County Government Report 2015

There are a number of springs running from cold to warm to hot springs available in Turkana County as seen in Figure 2.4. The warm springs include: Eliye Springs, also known as Ille Springs. The hot springs include; Lomonakipi in Kibish, Muruatapa,

Lobiritit and Kachapo in Latea and the Kapedo hot springs in Kapedo. The cold spring is the one in Nakurio in Kerio Delta. (GOK/UNICEF WASH PROGRAMME, 2013). However, clean and safe drinking water in Turkana County is still a scarce commodity thereby necessitating the proper utilization of this important resource in order to improve life of the Turkana Pastoralist Community.

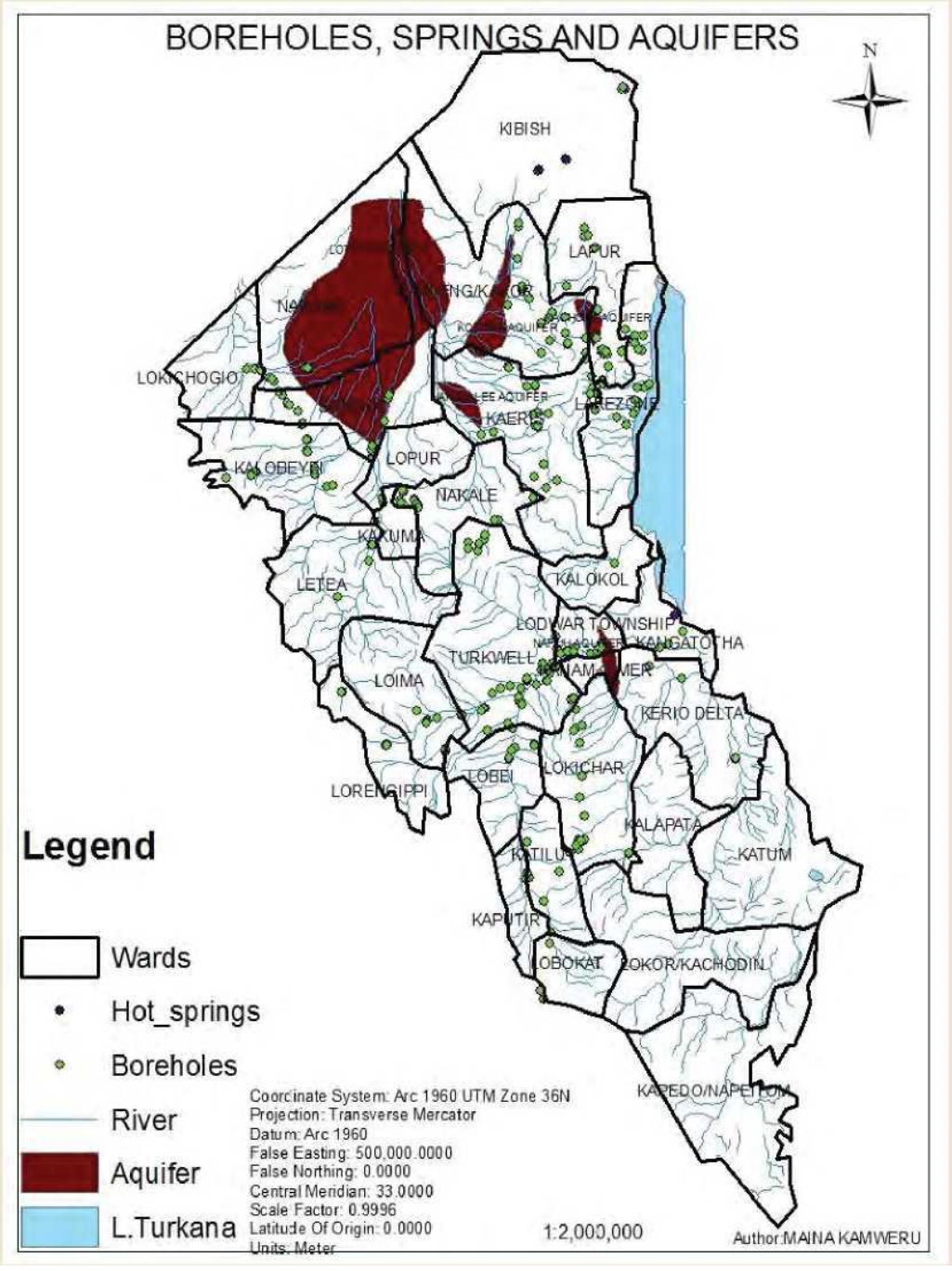

Figure 2.4: Rivers, Bore holes and Aquifers in Turkana County
Source: Turkana County Government Report 2015

2.3 Natural Resource Management

2.3.1 Principles of Natural Resource Management

2.3.1.1 Legal and Regulatory Frameworks

According to Armstrong (2005), good legal and regulatory frameworks help most developing countries to develop market that attract domestic and foreign direct investments, build their markets competitiveness, restore investor confidence, and promote economic growth and national development. However, Li and Flier (2007) note that there are many challenges to ensuring good legal and regulatory frameworks in developing countries especially when the business investors need to be convinced that they are not independent of the society, host community or the natural environment in which they operate. Based on these arguments, the researcher suggests that there is need for proper regulatory policies to ensure that investors in the Oil industry have a conducive environment for operations and that the host community is well taken care of to allow the trickle-down effect.

The issue of legal and regulatory framework is central to the petroleum sector sustainability and diversification of economic resources of any country (Olusa, 2007). In this regard, laws and regulations are put in place in line with the peculiarities of each country, which aim to boost the needed resource development and management. Inyang (2009) notes that some regulations may be provided by various governments in order to make the environment attractive to the Foreign Direct Investment in different sectors of their economy. Based on the two opinions, the researcher then concludes that regulations are necessary in different sectors of economy; they should not be negative or inhibitory. They should be fashioned with the purpose of facilitating realization of national objectives rather than clouding the vision of institutions.

Alo (2013) observes that a Constitution is the basic law and usually provides the fundamental regulatory framework for exploitation, development and production of natural resources in most resource-rich counties. Nevertheless, he also acknowledges that there are usually other laws that are made to provide the detailed guidelines for particular resources and sectors. Hunter (2014) also sheds light on the role of regulatory framework in optimizing the petroleum resources by comparing Australia and Norway. Based on these arguments, the researcher points out the need for policies that regulate the entire process of oil exploitation: Licensing of companies, Environmental impact assessments reports, policies on operation of Oil companies in relation to their activities and the local residents.

2.3.1.2 Fiscal Regimes and Resource Rent Extraction

According to Ushie *et al*. (2007), fiscal regimes are important in capturing the value of the non-renewable resources as revenue to the State. It has been found that a tax regime should be progressive and based on profits to capture the bulk of the resource rent. Fiscal regimes tend to be more complex and difficult to administer in developing countries with weak governance and low capacity than in countries exhibiting strong governance and sound technical capacity to administer the tax regime. It is therefore important to have sound policies that manage and regulate the captured resource rent.

Budina *et al.* (2007) asserts that there is a need for a sound institutional structure to manage the windfalls from oil shocks. The fiscal regime should also function in a way that not only minimizes economic risks to the State but also makes the petroleum sector more attractive for oil companies who have the know-how to extract the resource out of the ground. Studies on fiscal regimes associated with petroleum exploration and production have come to the conclusion that the type of the contract between the host

government and the contractor does not present substantial issues in evaluating the fiscal regime; it is the structure of the fiscal regime of the contract that is important.

2.3.1.3 Human Behaviour and Resource Management

Human behaviour is the driving force underlying many natural resource management concerns but is often the component that is given the least amount of attention in the development of management plans (Morton, 2008). Instead, plans are written that assume the main barrier to changing the behaviours of individuals is a lack of knowledge regarding issues impacting water and the actions that can be taken to solve them. Overreliance on ineffective communication channels to inform stakeholders of oil areas in planning efforts and traditional methods of technology transfer have potentially delayed progress in achieving behaviour changes.

Behaviour choices are predicated on a variety of social, psychological, institutional, and economic factors that need to be understood for successful management. Variables informing social science theories to describe and predict the relationships among these factors and watershed projects include, but are not limited to, attitudes, value orientations, perceptions of social capital, trust, risk, and awareness (Li and Flier, 2007). The people of Lokichar Basin strongly belief that oil exploitation is an answer to their economic problems. Thus, they expect oil exploitation to bring about economic development in their region. This is a perception that this study pursued to see its veracity.

In addition, the role of institutions is central in impacting and sustaining natural resources behaviour change (Ostrom, 1990). The complexity of implementing strategies that rely upon individual behaviour change for improving conditions is exacerbated by the nested and overlapping governmental boundaries that comprise the laws, rules, people, and organizations within a given watershed. Social information can

be used to understand and segment target populations to develop effective messages and policy tools to support behaviour change. Management plans should include goals and objectives related to communication and behaviour change that are based on social science data rather than potentially erroneous assumptions about what barriers to behaviour change exist (Cheng *et al*., 2003).

2.3.2 Approaches to Natural Resource Management

2.3.2.1 Judicial Approach to Natural Resource Management

The need to achieve sustainable development calls for sustainable management of natural resources through engaging all the relevant stakeholders. It has been persuasively argued that in environmental conflicts where there is high level emotional intensity, several of the early casualties in verbal and non-verbal skirmishes are tolerance and communication with people stopping to listen to those espousing contrary views and begin associating exclusively with like-minded supporters. Such emotions thus need to be managed effectively to avert full blown conflicts thus endangering exploitation of resources (Emmett, 2006).

According to Ojwang (2011), Judicial structures are put in place with the objective of settling disputes in a more justifiable manner by national governments and the constitutions of most nations establish institutions; judiciary organs of the government. It is the natural mandate of courts of law to entertain disputes. Litigation has however been criticized in many fora as one that does not guarantee fair administration of justice due to a number of factors. Courts in Kenya and even elsewhere in the world have encountered a number of problems related to access to justice. These include high court fees, geographical location, complexity of rules and procedure and the use of legalese.

The court is also dependent on the limitations of civil procedure, and on the litigious courses taken by the parties themselves. Conflict management through litigation can

take years before the parties can get justice in their matters due to the formality and resource limitations placed on the legal system by competing fiscal constraints and public demands for justice. Litigation may be very slow and too expensive and it may at times lose the practical credibility necessary in the environmental matters.

2.3.2.2 Community Based Approach to Natural Resource Management

Community-based natural resources management (CBNRM) is an approach under which communities become responsible for managing natural resources (forests, land, water, biodiversity) within a designated area. Turner (2006) asserts that CBNRM refers to resource management practices in which people dependent on those resources or affected by management practices are involved in the management and exploitation of these resources. This calls for cooperation between the parties or actors involved.

CBNRM has grown in practice in both developed and developing countries, but its reasons for implementation vary widely depending on both the local and national context. In developing nations, CBNRM has been used as a dual conservation and poverty alleviation strategy, especially for indigenous groups (Kellert *et al*., 2000). It is largely related to the realization that biodiversity conservation initiatives that impede local people's access to natural resources utilized for their subsistence and livelihood have been unsuccessful (Agrawal & Gibson, 1999; Chan *et al*., 2007). The creation of national parks and reserves, for example, has been a major source of conflict between urban and rural citizens because of their exclusionary nature (Kijtewachakul *et al*., 2004).

This is complicated by unclear land tenure because native groups often have no documentation of ownership (FAO, 2007). CBNRM in developing countries has been initiated by international non-governmental organizations, international institutions (United Nations), and national governments (Kellert *et al*., 2000). Local communities

have also implemented CBNRM without the guidance of external agencies and primarily in response to exclusionary management of public lands (Kijtewachakul *et al*., 2004). According to Benson (2001), the inception of CBNRM in developed countries is less associated with poverty alleviation and direct subsistence for local peoples. However, it is often related to indigenous groups, but generally these groups have more clear land tenure and ownership than those in developing countries (Native American tribes in the United States, Maori groups in New Zealand, and Aboriginal tribes in Australia).

Land tenure and biodiversity conservation play an important role in why cooperation between local communities and conservation groups has emerged in developed countries. In the United States, for example, most land not held by state or the federal governments is privately owned and managed, so promoting landscape level habitat conservation requires the cooperation of these private land owners (UNDP, 2012). In many countries environmental management has been the realm of national or state governments, with little recognition of the people living closest to the resource. However, the idea that local people may have a role to play in the planning and management of their surrounding environments is gaining ground. Based on this discussion, the researcher argues for the need to devolve power and authority from central government to local institutions and people. This is based on the belief and desire to integrate traditional ecological knowledge in balancing socio-economic and environmental goals in the conservation and protection of natural resources.

By decentralizing natural resource management, CBNRM is an effort to incorporate local communities into guardianship of their immediate environment in an attempt to meet ecological and social goals on both local and global scales (Agrawal & Gibson, 1999). The practice of CBNRM has been supported by a number of movements and

paradigm shifts in theory regarding humans and the environment. The flux of nature paradigm shift in ecology, for example, promoted new thinking in how species, especially humans, relate to their environments. The flux of nature concept has various elements, namely that a systems approach is most appropriate for ecosystem management, humans are a part of the landscape, and participation by humans in natural resource management is a viable and necessary endeavour.

This conceptual change allows for more incorporation of local groups in management of natural resources rather than excluding them completely as has been done historically. Interdisciplinary approaches to natural resource management, informed by fields such as political ecology and ecological economics, have also developed with the flux of nature paradigm shift and have implications for CBNRM (Berkes, 2004). These approaches to environmental issues are largely related to the fact that economic and social disparities are often the root causes of natural resource degradation. In fact, CBNRM has been acknowledged by the United Nations as a form of sustainable development, which has ecological, economic, and social goals.

CBNRM is an attempt to allow local people access to manage their surrounding natural resources, whether for direct subsistence or economic livelihood, and to preserve the species and ecological function that comprise native ecosystems. These projects are often initiated in biologically diverse areas where human activity has been a cause of ecosystem degradation and population declines of native flora and fauna. In totality, the differences between developed and developing countries is largely inconsequential, because regardless of scale, CBNRM focuses on the interdependence of ecological, economic, and social factors.

Brown *et al.* (2002) observe that community-based approach often leads to more equitable and more sustainable natural resource management for the following reasons:

(i) Those in closest contact with, and whose livelihoods are impacted by, natural resources are best placed to ensure effective stewardship.

(ii) Natural resources should be managed to ensure equitable benefits for the diverse interest groups within a population.

(iii) Communities often have better knowledge and expertise in the management of the natural resources than government agencies/private industry.

(iv) Multiple-purpose management of natural resources by communities generally provides more varied land use, with greater species diversity than private/industrial management systems.

(v) Local management may help reduce government costs

Community involvement in the management of natural resources requires that the community is empowered. Empowerment here means enabling people to gain strength, confidence and vision to work for positive change (Mulwa, 2010). An empowered community has the ability to make decisions on issues that affect them and can also assume full responsibility over the consequences of those decisions. The GOK therefore needs to empower the local residents of Turkana County for the good of the oil activities and so as to achieve the common good, which entails bringing about a positive social change to their lives due to the oil finds in Turkana County.

Community involvement in the management of natural resources, especially in the Oil exploration, leads to building capacity of the local community in terms of enhancing their knowledge, skills, attitudes and practices to enable them to cause similar effect and impact on the people and the community they serve (Mulwa, 2010). The oil company can do so by letting the local community be aware of the plans they have so that the local residents can as well be part of the planning and implementation of such initiatives.

For CBNRM, the involvement of local leadership is very important. The thrust of management, utilization and conservation of natural resources rest with traditional institutions (local leadership structures), who ensure that the norms, practices and values of community are respected (Mulwa, 2010). It is therefore important that the oil companies in Turkana County work well with the local leadership and respect the traditional institutions so as to bear fruitful positive impact on the livelihood of the Turkana Pastoralist Community. This means that there should be consultation between the local leadership and the oil companies in terms of what needs to be done to enable the oil finds in Turkana County turn into a blessing.

CBNRM entails community participation in every development initiatives since such undertakings affect their livelihood (Turner, 2006). In the case of exploitation of oil in Turkana County, the local residents ought to participate in the planning, identification and implementation of projects to be undertaken by the oil companies as compensation for the land that the local community has lost to the oil company activities; the local community also ought to take part in negotiations for the packages given to them by the oil company as part of their Corporate Social responsibility.

Community involvement in the activities of oil exploitation in South Lokichar Basin can help to negotiate deals that are responsive to the needs of the community. This ensures that the welfare of the community is taken into consideration. It is thus important for government and the private companies engaged in the developments in the oil and gas sector to adopt appropriate communication and community engagement strategies so as enable the flow of information about opportunities in the sector to trickle down to the communities. This will create an environment of mutual trust, transparency and accountability in government operations, and will avoid the dangers of a

community that is desperate and anxious with feelings of animosity and marginalization.

2.4 Pastoralism and Oil Exploitation

Pastoralism is an economic production strategy whereby people keep animals. This is usually practiced in ASAL areas. Pastoralism is the major source of livelihood of the Turkana people (Opiyo *et al.*, 2011). The major types of animas kept by the Turkana are Cattle, Camels, Donkey, Sheep and goats. Behnke (2008) asserts that livestock kept in Turkana are used for food, paying education for their children, payment of health services and payment of dowry among other uses. This indicates therefore that the livelihood of the Turkana people is largely based on nomadic pastoralism.

The kind of pastoralism practiced by the Turkana is nomadic pastoralism which is characterized by communal land ownership and keeping of diverse herds and a large size of herds (Schilling *et al.*, 2012). Land is important for grazing of livestock and habitation. Livestock kept in Turkana is used to support livelihood through payment of school fees for children, payment of health services, food and payment of dowry among other things.

With the advent of extractive industries in Lokichar Basin, the primary source of livelihood of the Turkana people, that is, pastoralism is under threat. Water and land are resources needed by both human beings and animals for their living. Apparently, water is a scarce resource in Turkana. Oil exploitation aggravates water scarcity as a lot of ground water is required in every step (Allen *et.al.*, 2011) during oil exploitation. Land use patterns have changed a lot with the advent of oil exploitation in the region: Land is needed by the Oil Co. for creation of Oil camps; There is also need for land for settlement of the increasing population in the region as a result of search for jobs and business opportunities; Land is still required for creation of social amenities like

schools and hospitals. With all these needs, the pastoralists loose parcels of pasture land for their animals.

Extractive industry offers both direct and indirect jobs to the host community (Devereux, 2010). This is in the form of Community Liason officers, Village Socialization officers, security and at times clerical jobs. The host community seeks these jobs and hence decreasing community dependence on pastoralism. Many young herdsmen have gone into the extractive industry as road marshals with pay thereby abandoning their primary duty of taking care of animals. Turkana Community therefore can be lured into such mentality in the name of livelihood changing dynamics and thus the collapse of pastoralism in the region.

Burning of fossil fuels (Oil) is a major driver of climate change (Amaroli & Balzani, 2011). With the creation of Oil camps, trees are cut down and this not only denies livestock shade but also leads to deforestation, which can contribute to climate change. Climate change will affect rainfall availability in Lokichar Basin. Rainfall in Turkana is already unreliable and poorly distributed even before Oil exploitation and so with the climate change and change of temperatures then the situation will be worse and thus drought experience will increase. Without rain, there will be no pasture for the animals and thus loss of livestock. This threatens the future of pastoralism in Lokichar Basin.

Devereux (2010) asserts that governments view pastoralism as a backward and primitive practice. It is against such background that pastoral communities have always suffered marginalization and discrimination. Pastoralists and pastoral livelihoods are also affected by government policies and laws on natural resources such as water, forests, wildlife, wetlands and environmental conservation. Often, the operation of these policies constrains pastoralist migration and access to resources such as dry season grazing grounds and water. For example, the constitution of Kenya does not

have specific provisions on pastoralism and pastoralists that guarantees the right to grazing land and the right not to be displaced from their lands.

Policies that are neither consistent with needs nor responsive to the uniqueness of the pastoral system are primarily to blame for pastoral vulnerability. From these arguments, the researcher asserts that the government does not have good will for pastoral communities thus relegating pastoral livelihoods to the periphery. This is a great shock to pastoralism and its future.

Even then, pastoralism may not completely disappear in Lokichar Basin given the values given to it by the Turkana people. Pastoralism is both an economic activity and a cultural identity in the ASAL.

As an economic activity, pastoralism is a livestock production system which takes advantage of the characteristic instability of rangeland environments, where key resources such as nutrients and water for livestock become available in short-lived and largely unpredictable concentrations. Supplying both domestic and export markets, pastoralism provides growing urban populations with meat at competitive prices and secures livelihoods, not only for millions of primary producers, but also for tens of thousands people working in and around the livestock trade (Aklilu and Catley 2011). On the other hand, as a cultural identity, it plays a critical role in socio-cultural functions including source of prestige, wealth, dowry and settlement of family disputes.

Based on the cultural identity, even modern education cannot erase pastoralism. Formal education is seen as a crucial step in the modernization of pastoralism. However, as in other modernization programs, this view is usually based on the assumption that educated pastoralists will settle, take a job in town, and therefore “modernize” not as pastoralists, but by abandoning pastoralism. In actuality, there is little modernity in

most “modern education,” delivered through a classroom model that can change the mentality of pastoral communities to abandon their cultural heritage. Hence, providing this group with education is very important, but it is not going to produce a new generation of educated pastoralists instead they remain with their traditional practice of pastoralism. This explains why even educated members of the pastoral communities still keep livestock and have a high regard to their cultural identity.

2.5 Local Community Involvement in the Activities of the Extractive Industries

Rural communities living in the neighbourhoods of natural resource endowed areas (protected areas for resource exploitation) are among the least developed communities. This is partly attributed to the fact that these communities are not involved in the activities of the EIs. In the global quest for sustainable development and democracy, participation in natural resource management by these communities has become an important component in rural development programmes. According to Tolimson (2012), Local community involvement in the activities of the EIs can be meaningful through three important elements: Community engagement; Community consent and Meaningful process and outcome.

2.5.1 Community Engagement

Community engagement is more of building on-going relationships and trust with communities (Wilson, 2013). Engagement between EIs and the local communities has been viewed at extreme ends: On the one end, EIs inform and consult with communities, and on the other end, communities are involved in discussions on costs and benefits, and empowered to take part in finding joint solutions and making mutual decisions, for example on benefit-sharing and future development options (Salomao, 2015). Empowering communities to become authors of their destiny is what is really needed in Lokichar Basin to realise the dream of the local communities living near the

oil exploration sites. Hence the EIs need to be structured in a way that it is possible to integrate stakeholders' opinions into their strategy and decision-making and thus change the EIs to respond to stakeholders' opinions. Effective community stakeholder engagement plays a crucial role in the company's social licence to operate as well as in seizing opportunities to improve its reputation and relations with host communities.

Empowering local communities builds commitment in the users of natural resources to manage such resources effectively (Bannett and Dearden (2014). Unfortunately, where local communities are not empowered to manage their natural resources, they usually remain unmotivated, and this has a negative effect on the well-being of the natural resources that are available. Attempts have been made to devolve authority from the state to the local power, but the effectiveness of that devolution is variable. For example, in Kenya devolution of authority usually results in power being concentrated in certain groups or members, with others being excluded, and especially women are under-represented in conducting the management of natural resources.

2.5.2 Free Prior and Informed Consent of the Local Community

Local community involvement is meaningful if communities are informed about a project in time, even before it takes off. In the event that information is freely and appropriately given and based on an analysis of this information, communities have the opportunity to give (or withhold) their consent for a project to go ahead (Elliot, 2013). This means that the local residents need to have prior information on the oil exploration in their region to give consent on setting of both the oil camps as well as consent on the exploration activities to be done. In practice, while communities should be allowed to say 'no' to a project, practically speaking the need to have the 'no' option is often (though not always) more about establishing an effective negotiation process (Mulwa, 2010). However, consent from the local communities has had hurdles in the sense of

ensuring that you are eliciting consent from the 'right' people; that communities really know what they are consenting to; and that they understand the impacts of the upcoming projects. Low levels of education of the people living in the oil exploitation zones has been taken as a point to ride on in manipulating them to consent without proper knowledge of the consequences of what they are consenting to.

2.5.3 Process and Outcome

It is important to note that community engagement is not just information-sharing. It is also important to elicit communities' input on the way things should be done to help government and industry to adapt their plans to minimise negative impacts and enhance positive opportunities. A good process will help communities understand how they will fit into project plans; let people participate in open discussions; understand how they can negotiate, including when to fight and when to talk (Wilson, 2014). However, a good process does not guarantee a positive outcome or positive change for communities. From the community perspective, the outcome is critical: if companies appear to listen to the local community opinions (a good process) but subsequently fail to do anything with the feedback, a process will appear not meaningful but rather fake and it is this that leads to mistrust and bad relationship between the EIs and the local community (Ross, 2012). This is seen on various occasions in Lokichar Basin. Meaningful Community involvement is about understanding the context of a project and local peoples' way of life, so as to understand the potential impact of the project on their lives. This allows one to place value on that, adapt plans where possible, and ultimately continuity to operate both in the short and the long-term.

According to Salomao (2015), meaningful involvement of all stakeholders in the EIs bears much fruits both to the local communities and the EIs. Some of the benefits to the local communities include:

(a) Enabling a community to develop its own vision and to plan for its own future development in the context of an extractive industry project (starting at pre-approval stage, where the question of issuing exploration licences remains open)

(b) Helping local people to understand a project and become more aware of a company's plans and how they might affect the community (positively or negatively)

(c) Creating a space, building trust and relationships and agreeing terms for ongoing dialogue and negotiation over costs/benefits/impacts

(d) Enabling community consent to be elicited for a project and maintaining consent over time

(e) Enabling communities to secure their rights; rebalancing power between stakeholders• Developing a concrete agreement, joint strategy, solutions and mutual decisions, for example on benefit-sharing, job creation and future development options

(f) Resolving issues and community concerns effectively and ensuring community feedback is incorporated into corporate policy and practice

On the other hand the benefits accrued to the companies (EIs) include:- Understanding the context of a project; keeping track of public perceptions/opinions/events; Building trust and understanding with the community, to enhance communication and increase acceptance of a project (social licence); Agreeing terms for on-going dialogue and negotiation over costs/benefits/impacts (which may or may not lead to 'consent'); Eliciting, and providing useful feedback on, inputs into project planning; Achieving a particular objective in the course of project implementation, such as agreement on the siting of a facility or pipeline; Avoiding conflict and other sources of delay and loss,

and time wasted on ‘fire-fighting’; establishing effective mechanisms to mitigate negative impacts/maximise opportunities; Preserving company reputation in the eyes of the public and government; being able to access resources and opportunities in the future.

Therefore, the proposition that is envisaged in this study is that EIs have to be able to identify what constitute the unique interests and expectations of host communities and consequently to develop constructive approaches for engaging and managing relations with host communities. The idea the present research is putting forward is that the EIs need to recognise and respect values and interests of the host communities and thus treat all stakeholders in an ethically responsible manner and preserve the present and future environment in the interests of all stakeholders. Hence, to achieve a robust stakeholder engagement and relations management, a collective stakeholder representation to communicate stakeholders’ interests and expectations is needed.

2.6 Contribution of Oil Exploitation to People’s Livelihood

The contribution of resources be it renewable, non-renewable, environmental, slowly renewable or quickly renewable to sustainable livelihoods depends so much on prudent management, proper policies, frameworks, and oversight. Natural resources form major means of survival for the rural folk as they provide them with income and employment opportunities. The fact that direct and indirect jobs are available to the local residents living near the oil wells cannot be doubted. Oil exploitation is an activity with visible indicators of job creation (Yates, 2012). It is clear that some of the local residents are employed directly by the oil company in various capacities such as community liaison officers among others.

Even then the number of those employed is small owing to the fact that the local residents have no technical expertise on oil extraction studies. However, job

opportunities created by the oil companies are an alternative source of livelihood for the Turkana pastoralist community. The fact that not all the local residents will be employed by the oil company necessitates that some of the local residents need to be encouraged to engage in entrepreneurial activities. The local entrepreneurs can be given financial incentives as well as other entrepreneurial aid and skills to engage in business. According to Emeri, a local resident of Turkana South District, "…The government needs to provide capital to Turkana people to invest in business and educate their children for them to benefit from the oil discovery in Turkana…" (International Conference in Nairobi, January, 24, 2014).

These business avenues available to the local residents can be transport services to aid the movement of workers to and from the place of work (oil wells) through the famous "bodaboda" business in Kenya or even offering taxi services at the airport on arrival of some company workers from places outside the County. There is also room for the mushrooming of business such as restaurants, vendor shops and rental houses or real estates around the oil wells and the towns near the drilling sites. These business avenues help to improve the livelihoods of the Turkana pastoralists and can be an alternative source of income and livelihoods.

Asamoah (2011) posits that oil discovery leads to positive changes in the transportation system, resulting from enhanced road, air and sea infrastructure. The availability of large amount of revenue to the government from the oil-export will encourage fiscal budget expansion and thus allowing for rapid spending on development activities and projects such as social amenities and infrastructure without straining the government. Nyenyembe (2017) contends that oil exploration should be a catalyst for economic development. Turkana County is one of the poorest counties. Therefore, oil exploitation should change the economic status of the local community and thus turn around the

lifestyle in Turkana to a minimum descent living. For it to be so, there is need for proper management of oil revenue so that the benefits of oil revenue can trickle down to benefit the citizens of the country and more so lead to holistic development in the country.

Turkana County is one of the poorest and underdeveloped counties in Kenya and so the oil finds in Lokichar Basin need to yield revenue that will be pumped back to the County government of Turkana to realize development and access to adequate social amenities. With available revenue, more loans can be made available to the private sector to enable it to effectively contribute to the overall development of the national economy.

2.7 Obstacles People Face in Eking Livelihood during Oil Exploitation

Oil exploitation faces various challenges in many countries. There are disagreements and disputes over access to, and control and use of natural resources. These challenges arise because people have different uses for resources such as forests, water, pastures, land and minerals or want to manage them in different ways. Challenges occur when these interests and needs are incompatible, or when the priorities of some user groups are not considered in formulation of policies or planning of programmes and projects. Vested interests in natural resource wealth in Africa has always led to upheavals and civil wars. Consequently, many people lose their lives due to resource-based conflicts.

When asked to give his comment on the discovery of Oil at the Delta region in Nigeria, Amstel Monday Gbarakpor had this to say "……The only legacy that oil has brought to Niger Delta is death…" Meaning many lives have been lost in the Niger Delta region following protests against problems related to Oil exploitation. These protests majorly arise from denial of free access to land to the local people and lack of compensation for the loss of community land.

The political economy of resource-based states links oil wealth with high levels of corruption. The availability of resource revenues insulates corruption. Oil-rich states are often corrupt (Yates, 2012). Corruption is a great hindrance to natural resource management. In the face of corruption, it is only a few who reap the benefits and this then leads to economic disequilibrium. Corruption is abuse of public or private office, position or power for private gain in contravention of established rules or norms (Kaufmann &Vicente, 2011). Corruption is a manifestation of weak governance which impedes proper natural resource management that should translate to the trickle-down effect of resource benefits. Corruption has been manifested in Lokichar Basin through improper allocation of tenders and unprocedural employment, in which cases whereby money exchange hands in the name of "kick-backs" or the practice of nepotism.

This is exacerbated through lack of transparency and accountability in many governments in Africa with natural resource wealth as well as Transnational Corporations (Oil Companies) working with such governments. As a matter of fact agreements between TNC (Transnational Companies) involved in Oil and local governments, like in our GOK, are always hidden from the public (Karl, 2007). At times even there is a lot of secrecy in the oil wealth budgets and this promotes corruption as the people are not informed of any accruals from the oil. According to Ross (2012), the greater the oil wealth is, the more secretive the budget. Secrecy of public information hinders transparency in the governments. In this case the cost of Oil and even important information regarding EIA is hidden from the public.

Yates (2012) points out the root cause of corruption as greed. Greed is a psychological motivation grounded in the human nature, whereby one individual wants to take everything or even to amass wealth at the expense of others in the society. Corruption is seen in the form of rent seeking and political patronage. Rent-seeking refers to efforts

both legal and illegal to acquire access to or control over opportunities for earning rents (Karl, 2007). The word "Legal" here refers to agreements between TNC and governments for payment of oil rent whereas illegal means refer to acquisition of oil rents by individuals through dubious means that are not even accounted by the government. Either way they become manifestation of corruption because agreements are kept as top secrets from the general public.

The implication of rent seeking behaviour is that *ceteris paribus*, the larger the public purse or expenditure, the less it will be noticed if there is a diversion of resources into the pocket of state leaders and their cronies or other interest groups (Taylor, 2008). Rent-seeking is greater in resource-rich countries because wealth is concentrated in the public sector (or possibly in a small number of companies). Therefore, the bulk of the rents created in these economies are channelled by bureaucrats, the majority of whom are members of the politically dominant groups. Such rent-seeking behaviour produces undesirable results for the economy: It distracts attention away from long-term development goals towards maximizing rent creation and capture; Creates extremely powerful lobby groups that are able to block needed economic reforms; Makes it more difficult for governments to adjust spending when faced with revenue fluctuations and finally rent seeking is tantamount to the creation of monopoly power.

Patronage is where politicians employ public resources in order to entrench themselves in power (Kaufmann and Vicente, 2011). When there is an increase in natural resources, the government of the day will seek to increase his tenure for political gains. The ways in which this could be done are numerous: Politicians adopt policies which are in their favour, and in doing this, public servants are pulled along by being offered employment even though they may not be qualified and efficient for the job (Ross, 2012). This is done as a reward for political loyalty and to ensure that the politicians are like the

"fathers" of the electorate and the local residents. Hence the politicians then claim the right of being the voice of the local communities having assumed the patrimonial figure. This is seen in the use of royal pluralism in the language of politicians, like you hear articulations by politicians: "….we, the people of Turkana want….". This is meant to assert that they (politicians) are the bearers of the thoughts and desires of the local community even when it is not the case.

In the name of patronage, Governments may also embark on public projects to gain political support and in most cases these projects are not beneficial to the state but rather to their political supporters. The militarization of most oil states in Africa is a fall out of this practice of patronage. At the same time, resource revenue encourages patronage as politicians finance their supporters to cling to their power. Patronage can as well the take the form of elites in the community (Karl, 2007). The struggle for large resource rents will increase the concentration of economic and political power in few elites. Few elites in a community like Turkana County can easily manipulate the large illiterate population and hence broke for the locals in terms of resource benefits from the TNC involved in the oil sector. Consequently, resource benefits remain in the hands of a few selected families of elites as well as politicians who take the patrimonial role.

External investors, especially the foreign oil companies, may also give financial or logistical support to those in power (Politicians and community elites) in order to fight any opposition in return for soft contracts and negotiation terms. According to Ghazvinian (2007), in this type of system, oil makes it possible for the gains revenues accruing from the export of oil to be shared among the *crème-de-la* while any problems related to the resource is channelled down to ordinary citizens. This means that the crème of the society enjoy the good benefits of the natural resource wealth whereas the

local community (residents) suffer the negative consequences resulting from the oil-related activities.

2.8 Sustainable Livelihood

This section dealt with the concept of Sustainable livelihood together with the resources that can facilitate sustainable livelihood; the Livelihood of the Turkana Pastoralist Community as well as the capacity of the Turkana people to adapt to shocks and stress due to the exploration of oil.

2.8.1 Concept of Livelihood

Ellis (2000) defines livelihood as "comprising of the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household". Livelihood here implies how people can make a living or if you like a way of thinking about the objectives, scope and priorities for purposes of positively transforming their living standards. Based on this definition a livelihood is sustainable when an individual: Can cope with and recover from the stresses and shocks and can maintain or enhance capabilities and assets both at the time and in the future, while at the same time not undermining the natural resource base.

Hence sustainable livelihood is geared towards enhancing progress along the path of eliminating poverty. In assessing how oil will impact on their livelihoods, this study discusses the assets of the local people, and how social trends and networks can help to introduce alternative livelihood strategies.

2.8.2 Sustainable Livelihood

This is a holistic, asset-based framework for understanding poverty and poverty reduction strategies. The Sustainable Livelihood Framework (SLF) is both an analytical

tool and a tool for policy direction. The Sustainable Livelihood Framework adapted here was developed based on a model developed by the United Kingdom's Department for International Development (DFID) and adjusted for use in Canada. SLF will form the basis for discussing the livelihood assets of the respondents and later examine the vulnerability of oil as a shock to the communities.

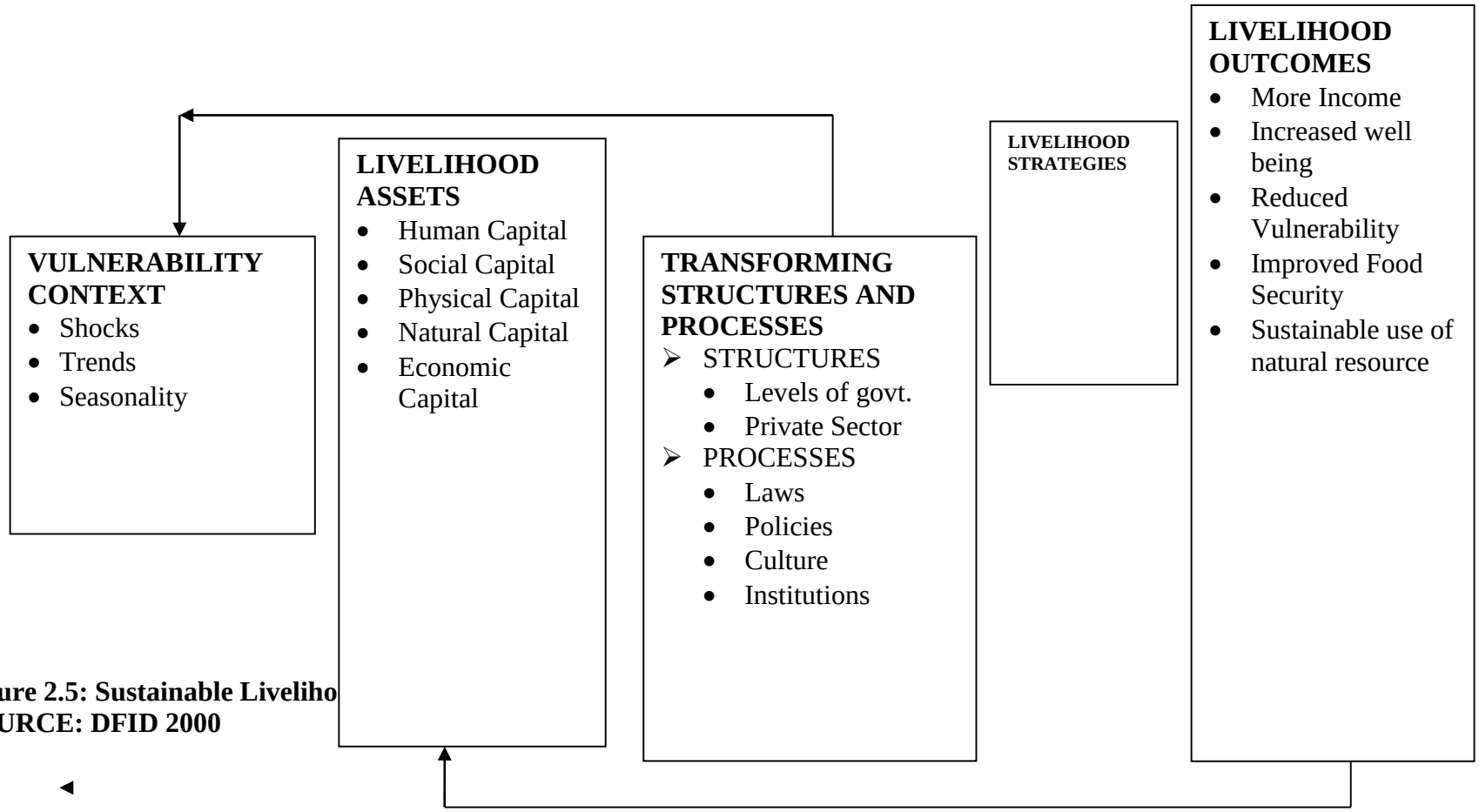

Figure 2.5: Sustainable Liveliho
SOURCE: DFID 2000

Using the Sustainable Livelihood Framework, This study sought to point out the livelihood resources available for the local communities and necessary for sustainable livelihood; the shocks to which the local community was exposed to due to Oil exploitation and thus rendering them vulnerable; structures in place for the proper management of the Oil wealth for purposes of bringing about positive transformation in the livelihood of the local community and the strategies required for sustainable livelihood. Finally, the study with the use of the sustainable Livelihood Framework points out the indicators of sustainable livelihood which in the SL Framework are called livelihood outcomes.

2.8.2.1 Livelihood Assets

These are factors that enhance or impede livelihood opportunities. These include assets owned, controlled, claimed or accessed by the household. The ability to pursue a sustainable livelihood is dependent on these livelihood resources which are seen as the 'capital' base from which productive streams are derived upon which livelihoods are constructed. There are five types of livelihood resources that are necessary for enabling sustainable livelihood: Natural capital, physical capital, economic or financial capital, human capital and social capital.

Natural capital

This include the natural resource stock such as soil, water, air, mineral resources (Oil, gold, diamond) and environmental services such as hydrological cycle, pollution and sinks among others, from which resource flows and services useful for livelihoods are derived (McLeod, 2001). This capital yields products utilized by human populations for their survival. A major natural resource (capital) of interest in this study was Oil, which was seen as a catalyst for better livelihood for the people of Lokichar Basin. The local community has high expectations of improved quality of life as a result of oil

exploitation in their region. Oil has led to better living standards in other countries such as Canada, Angola and especially Norway. The residents in Lokichar Basin see themselves moving from "grass to grace". This can be realized with better management of oil revenue, equitable share of proceeds from oil exploitation and access to job opportunities related to extractive industries.

Physical capital

These are assets brought into existence by economic production processes. Physical capital includes tools, machines and land improvements like terraces or irrigation canals that will be used for increasing productivity. Other forms of physical capital are infrastructure (transport, roads, vehicles, secure shelter and buildings, water supply and sanitation, communications and energy), schools and health posts (DFID, 2000). With physical capital, the people are able to produce what they need for consumption and thus meet their basic needs. An important physical capital in our case here is Land. Among the Pastoralist communities, land is important as it provides pasture for their livestock. However, investments can be done to enable the local communities practice farming at a small scale through irrigation as an alternative means of livelihood. With Oil exploitation, Lokichar Basin would get better and improved infrastructure: Good roads and better means of communication. It is good to note that land is likely to be a source of conflict with the emergence of oil exploitation. This is because land traditionally has been owned communally but with the advent of oil exploitation, people embraced sale of land that led to individual ownership.

Economic or financial capital

This is the least asset to poor people and thus all other livelihood assets are vital to be able to arrive at this one. This include capital base such as cash, credit/debt, savings, income from employment, trade, pension and remittances as well as other economic

assets including crops and livestock, which are essential for the pursuit of any livelihood strategy. Exploitation of Oil comes with CSR activities such as micro-financing local communities where the locals receive loans for economic empowerment. Women groups in Lokichar Basin have benefitted from micro-finance and have started business entreprises (Ustawi, 2018). In recent times, there have emerged secondary sources of financial capital for poor people such as a house and renting it out, or investing in a huge livestock or poultry farming, which will bring in additional income, whiles serving as a buffer against a rainy day (Ellis, 2000). With increased population in Lokichar town, the local residents have set up rental houses to accommodate the large number of people working in the EIs. Consequently, Lokichar town became a hub of business. However, economic growth associated with oil exploitation is also likely to lead to high consumer spending that is tied with hike in commodity prices and this will have negative impact on those without income.

Human capital

This includes the skills, knowledge, ability to labour and good health as well as the physical capability important for the successful pursuit of different livelihood strategies. This generally entails the education level and health status of individuals in the community, which is necessary for producing everything necessary for a better way of living. This means that a healthy and educated people can contribute a lot to the transformation of the society and thus lead to high productivity in the community. Therefore, it is important to invest in education and training of human resource. According to Lowe and Schilderman (2001), knowledge, skills and information are necessary for a better standard of living. Knowledge, talent, ability and attributes enable a person to attain personal, social and economic well-being. The human capital is the extent to which every individual in the community is realizing their potential by making

the most of their abilities to be creative and adaptive to changing livelihood situations. The local residents benefit from education scholarships offered by EIs as a CSR activity.

Social capital

This include social resources such as networks, social claims, social relations, affiliations and associations upon which people draw when pursuing different livelihood strategies requiring coordinated actions (Serrat, 2008). The sets of networks are family, community, village, ethnic or professional groups. This capital is vital as it is from the social networks and associations that people derive support that contributes to their livelihoods. Good relations ensure the spirit of solidarity and teamwork for every community desired project. Social capital is an important asset if the oil exploitation is to be a blessing to the people of Turkana County because it is when the extractive industries and the host communities enjoy good rapport that oil activities will go as planned and consequently translate to better living standards of the host community.

Social capital is founded on the African philosophy of "I am who I am because of those around me" (Mbiti, 1990). This entails relationships between individuals that enable community building and fostering of involvement and development of trust and solidarity between community members. The main values of social capital are trust, sense of community and solidarity in order to yield economic success. It is an expression of reciprocity between household based on trust derived from social ties. For a sustainable livelihood in Lokichar Basin, there is need for good relations and networking between the locals and the oil company as well as both the County government and the central government.

2.8.2.2 Vulnerability Context

There exist uncertainties and risks associated with exploration of Oil that can make the local community members to be vulnerable. This entails negative shocks that the households faced as a result of oil exploitation: One major shock to the Turkana people was loss of original livelihood, which in this case is pastoralism. Pastoralist populations today more than before face more pressure to their way of life. Among the stress and shocks faced by pastoralist today are: over population, land grabbing and hence loss of pasture land to private farms, ranches, game reserves and urban areas, drought, floods, conflicts, raids, and inequality in livestock economy among others (Nunow, 2012). These stress and shocks expose the pastoralists to vulnerability. With the recent discovery of oil in Lokichar Basin, it is clear the Turkana pastoralist will lose their pasture land to the Oil companies to be used as Oil camps for residence as well as areas of operations for the oil-related activities.

Asamoah (2011) posits that oil exploitation leads to changes in land-use patterns like agriculture, fishing, hunting and pastoralism among others. This was the case with fishing population in Ghana that lost their primary economic activity of fishing due to water pollution caused by Oil exploitation activities as well as some being absorbed in the unskilled jobs related to the Oil exploitation. Projects were already in place where the oil has been discovered in Lokichar Basin to promote the diversification of economic activities thereby limiting dependency on the livestock. The original grazing areas have now become oil camps, thereby limiting their grazing areas. This means that the Turkana pastoralists can no longer depend on their livestock as an economic source and hence they have to adapt to the new livelihood that is not livestock oriented.

There is a link between natural resource and conflict and central to these wars in oil-producing countries is oil revenue, which is mismanaged. According to Yates (2012),

of all the natural resources, none is more likely to provoke conflicts between states than oil. Natural resource-based conflicts lead to wars that result to death of human beings. Conflict is detrimental to development of a region or place because no progress can be realized in the face of insecurity. Even investors can be slow to put their resources in region that is prone to conflicts.

Asamoah (2011) asserts that exploitation of oil leads to change in the socio-cultural structures like social systems, cultural organizational heritage, beliefs and practices due to foreign influence. These cultural changes can be both positive and negative. They can be positive owing to the fact that no culture is static and therefore due to the dynamic characteristic of culture, then we can say that cultural changes are as well good. However, the cultural changes that may not be in line with original culture of the local residents are detrimental to the livelihood of the local inhabitants of the areas near the oil drilling sites and this can lead to cultural erosion which in this case becomes a shock to the local community. Some of the socio-cultural shocks linked to emergence of oil exploitation in Lokichar Basin include: Influx of commercial sex-workers to introduce the practice of prostitution; changes in dressing as a way of adapting to the new entrants in the region; and even language shock.

Oil exploitation leads to an increase in the local population due to migrant labour that looks for access to employment and other opportunities for a better living (Ross, 2012). Population increase comes with other impacts such as increase in crime rate, strain of available social amenities, strain of available resource and unemployment as people compete for the few available jobs.

Revenues from oil production if considered a source of income are highly volatile. There are three sources of volatility: the variation over time in rates of extraction, the variability in the timing of payments by corporations to states, and fluctuations in the

value of the oil produced (Humphreys et. al., 2009). Volatility in the oil states is driven by fluctuations in the government's resource revenues. Volatility can hurt economic growth by creating uncertainty about the future, which in turn discourages private sector investment.

Environmental problems are inevitable when oil has to be extracted from the ground. According to Yates (2012) oil discovery comes with environmental pollution. The oil drilling sites in Turkana County have experienced environmental degradation due to the activities of the oil companies in the region. This is in the form deforestation to set oil camps and thus possibility of climate change that can lead to drought and famine. According to Asamoah (2006) exploitation of oil creates environmental problems in diverse forms: Atmospheric impacts in the form of atmospheric emissions like flaring and purging gases, combustion in diesel engines and gas turbines, airborne particles emanating from disturbance of the soil during construction and vehicular traffic and particles from combustion operations. These can lead to diseases to the local residents living near the oil wells.

2.8.2.3 Livelihood Strategies

Livelihood strategies are measures which households put in place to realize livelihood increased well-being (e.g. non material goods, like self-esteem, health status, access to services, sense of inclusion), outcomes. These strategies are dynamic, responding to time and change over time. Individuals and households engage in natural resource-based activities, as well as non-natural resource based to survive. Natural-resource based activities may include gathering of firewood, cultivation or harvesting of food crops such as corn and rearing livestock (Ellis 2000). Non-natural resource-based activities are trade, repair of vehicle, remittances, and pension proceeds. There are a number of livelihood diversification opportunities available in Turkana which are in

themselves adaptation mechanisms for their threatened pastoral-oriented way of life. Some of these livelihood diversification opportunities existent in Turkana County are:

(a) *Commercialization of Livestock*- Turkana Pastoralist Community sell their livestock in order to earn some income that will enable them to pay school fees for their children, pay for medical services and other services as well as buying food for the household members. This practice has led to people coming to sale yards from different places both as buyers of the livestock and sellers of the livestock.

(b) *Ecotourism*-According to Blench (2000), many extensive pastoralist areas in Eastern Africa are increasingly being seen as potential biodiversity reserves. Sites in Turkana that possess latent ecotourism potential include: Eliye-Springs, Lobolo and Choro Island (where numerous crocodiles abode), Kapedo Springs and the Turkana south (KWS) Game Reserve in Kainuk. Indeed, an ecotourism circuit has been put forward for Turkana that features Turkwel Gorge Dam, Nasalot National Park, Southern Turkana Game Reserve and the Lake Turkana area (including the islands and Koobi, famous for its archaeological importance). With these, Turkana County can earn revenue that is later put to development projects to better the living standards of the people.

(c) *Fresh milk and dried milk*-. Pastoralists sell their milk for cash in order to purchase consumer goods and to pay school fees. This is done at the local level in small scale.

(d) *Collection and sale of wild fruits*-The collection and home use or sale of wild fruits is widespread throughout Turkana County. The most common fruits sold include Doum Palm (date-like), Ngakalalio, Edung and Edapal, and Ebei. These wild fruits are collected by individuals and taken to market where they are sold.

(e) *Casual and waged labour*-According to Little et al. (2001), demand for casual labour in Turkana is in the form of agricultural or building jobs. However, in the case of agriculture, most casual jobs are available in the wet season with some herding opportunities in the dry season. Within Turkana County, there is a distinct lack of opportunities for waged or salaried labour. Even then the oil activities have provided a ground for casual labour, whereby some of the local residents have been absorbed by the oil companies as security guards and others do laundry and even cook for the staff of the oil companies.

(f) *Honey production*-According to Mwangi and Swallow (2005), honey production is a commercially viable enterprise, especially along the riverine ecosystems (Turkwel and Kerio Rivers) and higher altitude locations close to the Ugandan border. The principal areas of honey production include Turkwel, Kalemunyang, Lokapel, Kanaodon, Kainuk, Loyapat, Nakwamuru, and Oropoi.

2.8.2.4 Transforming Structures

Structures entail the levels of government, which in the Kenyan case consists of County government and National government under the 2010 constitution. The levels of government are responsible for formulation and implementation of policies; deliver services and perform all sorts of other functions that have an impact on livelihoods (Serrat, 2008). Structures are meant to create and enforce legislation, provide the necessary requirements for acquiring and capitalizing upon assets, manage natural resources, and provide other services crucial for gaining access to assets, exchanging them, and benefiting from their use.

Following the 2010 Kenyan Constitution, the County government works hand in hand with the National government though more power is vested in the National (Central) government. Consequently, there is need for the two levels of government to see to it

that Oil exploitation in Lokichar Basin leads to sustainable livelihood for the local community through a strong legal regulatory framework. The 2010 Kenyan constitution can serve as our basis for proper management of the resource wealth and resource sustainability. These structures cannot operate in the absence of institutions. Structures must be accompanied by appropriate policies if they are to have any impact on the poor, while policies must be implemented by competent structures if they are to be carried out in the intended manner.

This means that structures cannot operate in the absence of institutions. Institutions refer to the formal rules, conventions, policies and informal codes of behaviour that comprise constraints on human interaction. According to Barnes (2009), institutions govern resource use or rather institutions define or delimit the range of privileges to individuals of specific use of resources, that is, how a resource is used and owned. Institutions provide a means to achieve social order and represent a mode of public and economic organization. These institutions craft benefit-sharing approaches of the resource wealth as a means of addressing problems related to the governance of social-ecological systems in resource-rich countries.

There has been significant improvement in the Kenya's legal and policy environment given the new constitutional dispensation under Article 69, which lays emphasis on the importance of protecting the natural resources for the equitable benefit of citizens of all generations. This article also stipulates public participation in the management of natural resources, access and benefit sharing rights, compensation mechanisms and environmental audit among others.

Kenya has the Environmental Management and Coordination Act of 2006, which seeks to ensure issuance, compliance and enforcement of access permits. This act ensures that Environment Impact Assessment (EIA) is done before pursuit of a project and in

this case EIA report for the oil activities in Turkana County is considered so as to put in place measures for mitigating adverse environmental effects of oil activities on the local residents and their environment. The aim of this act is to ensure clean, safe and sustainable environment for the people and in so doing it brings to fruition the Kenya Vision 2030 aim for a clean and safe environment for its citizens.

Kenya also has the Petroleum Development Fund Act no.4 of 1991, whose objective is to develop common facilities for the distribution or testing of oil products and for matters relating to the development of the oil industry. The fund is meant to offer retirement benefits (pension) administration services in future.

2.8.2.5 Livelihood Outcomes

Livelihood Outcomes help us to understand the 'output' of the current configuration of factors within the livelihood framework; they demonstrate what motivates stakeholders to act as they do and what their priorities are. They might give us an idea of how people are likely to respond to new opportunities and which performance indicators should be used to assess support activity. These are indicators of sustainable livelihood which include: More Income, Increased wellbeing, Reduced Vulnerability, Improved Food Security and Sustainable use of natural resource.

More Income

This relates to the ability of a particular combination of livelihood strategies to create gainful employment for a certain portion of the year (Ellis, 2000). Through employment then the individuals can get income for their livelihoods. This may be on or off-farm, part of a wage labour system or subsistence production. Income can be accrued from wage labour and agricultural production (typical of rural livelihood). It is the expectation of the local communities that oil-related activities will offer them employment opportunities so as to get income for their survival.

Increased Well-being

A livelihood comprises the capabilities, assets including both material and social resources, and activities required for a means of living (DFID, 2000). Increased well-being implies non-material goods like self-esteem, health status, access to services, and sense of inclusion. With income from various sources, the people can then afford to live a good quality of life with access to basic services: health and education. The fact that one can afford basic needs even uplifts their esteem. Consulting the members of the local community on activities of oil companies gives them a sense of inclusion in the activities of oil exploitation.

Reduced Vulnerability

Vulnerability as a concept in the SLF refers to the external environment in which people pursue their livelihoods and their exposure (risk) to the negative effects of the external environment, as well as their resilience in resisting and recovering from external shocks and trends (Li, 2012). Vulnerability in this context refers to things that are outside people's control: It is usually negative but it can also provide positive opportunities. From the positive approach, we see that the livelihood assets can be a great help in reducing vulnerability of the local communities.

Reduced vulnerability entails better resilience through increase in asset status. The livelihood assets, especially, financial capital and human capital investments, are important because they have a direct impact on people's asset status and the options that are open to them. With them the local communities are less vulnerable to the shocks and stress arising from the oil-related activities. This is especially important for whether people are willing or interested in livelihood adaptation for purposes of building resilient livelihoods.

Improved Food Security

Improved food security signifies increase in financial capital in order to buy food. The notion of poverty has been broadened to include a deprivation in capabilities, voice and power that contribute towards a lack of well-being (Baumann, 2002). This means that poor people are food insecure. Livelihood assets available to the people as well the livelihood strategies are measures of poverty reduction and thus enable people to cross the poverty line (Nunow, 2012). Benefits accrued from the natural resource wealth (Oil) can assist the local communities develop measures for food security.

Natural Resource Base Sustainability

According to Allcott (2011) natural resource base sustainability refers to the ability of a system to maintain productivity when subject to disturbing forces, whether a stress (a small, regular, predictable disturbance with a cumulative effect) or a shock (a large infrequent, unpredictable disturbance with immediate impact). This implies avoiding depleting stocks of natural resources to a level which results in an effectively permanent decline in the rate at which the natural resource base yields useful products or services for livelihoods.

Natural resource base sustainability is possible with livelihood adaptation strategies that offer alternative ways of earning a living without necessarily depleting the available resources. Natural resources such as crude oil and natural gas are depletable resources (exhaustible resources), which exist in finite quantities such that every unit consumed today reduces the amount available for future consumption. Therefore, they need to be used with care so that they are not completely depleted.

2.9 Oil Exploitation in Norway and Nigeria: Lessons for Kenya

Norway and Nigeria are both rich in Oil reserves. Whereas Norway has utilized and hugely benefitted from its Oil-wealth to earn the highest place in the United Nations

Development Program's list of the best development performance, Nigeria has ironically not fully benefitted from the Niger Delta's Oil-wealth, hence clustered near the bottom line of development index (UNDP, 2016). The two countries, therefore, present an excellent specimen for this study because although they both share some similarities as well as utilize the main aspects that influence the manner in which a nation manages its natural resources, they have performed differently in the management of their oil resources. Hence it is important to examine why Norway has a better performance in the management of oil resource than Nigeria, with aim of drawing some practical lessons for Kenya, a new entrant in the Oil industry.

The Norwegian approach to the Oil resource is guided by the principle of "Oil for development" (Oslo, 2013). With the discovery of Oil resources off the Norwegian coast in the 1960s, this approach was further elaborated with a stronger, more sophisticated public sector involvement: a ministry setting policy; an independent regulatory body monitoring adherence and performance; and a national oil company (Statoil) engaged in commercial operations to maximize public benefits and thus turn the Oil resource an engine of development in Norway. The "Oil for Development" approach contains seven dimensions:

a) The ability to tax international oil companies and ensure a fair 'government take': An income regime that strikes the balance between the two critical elements: ensuring that the public sector largely captures full 'economic rent' from a non-renewable resource, while providing incentives for investment in this high-risk sector.
b) Concessionary system for allocation of exploration and production rights: This relies on civil servants' assessments, skills and integrity, and is not necessarily

fully transparent and is one dimension Norway is reticent about recommending to other actors.

c) Gradual entry into the industry of national technological and financial actors ("local content" concern): Building on Norway's shipbuilding and engineering firms, the Norwegian petroleum industry gradually built its skills in exploration, production and petroleum-related services, building the most dynamic and successful industrial sector in the national economy.

d) Strict regulation of the sector: Most of the legislation regarding the petroleum sector is based on safety and environmental concerns, where "polluter pays" principles based on tough standards pushes all responsibility onto the producer and thus forces self-enforcement.

e) Public sector management of the financial resources: Norway has multiple controls for ensuring that all petroleum revenues enter public coffers as they should, in order to minimize possibilities for corruption.

f) De-coupling public spending from revenue streams: the establishment of a petroleum fund: Due to the immense scale of petroleum revenues compared to the rest of the economy, Norway had to design a mechanism to manage both the cyclical price swings in the oil market, but also to avoid the problems of "Dutch disease". This led to the establishment of a sovereign wealth fund into which the oil revenues flow. The state over time is only to spend the return on the capital – set to 4% - in the annual budget, thus in principle ensuring a perpetual fund so that future generations also benefit from this non-renewable resource.

g) Social democratic purpose of the petroleum incomes: creating jobs, reducing inequalities – turning the resource curse into a blessing: A fairly strong consensus across the political spectrum regarding the objectives for the oil wealth has

ensured a stable evolution of the sector and strong democratic control. This has both benefited from and contributed to further development of a largely social-democratic societal model.

2.9.1 Policies in the oil industry in Norway and Nigeria

As the owner of the natural resources, the State has a responsibility to ensure that these resources are developed and managed for the benefit of the country and its populace. Therefore, it is the role of the State to assert control over the development and the management of the resources to maximise the economic and social benefits for the State and its citizens, while ensuring the least possible environmental harm. This control is asserted by establishing, maintaining and enforcing a policy framework for the exploitation of petroleum resources.

The principles of Norwegian petroleum policy were laid out in 1971 in the “ten oil commandments”. (Ole Gunner, 2014). These commandments underpinned Norwegian oil policy, dictating two essential policy elements that remain central to the Norwegian petroleum policy today: sound macroeconomic policy, and the creation of a State-owned Oil company to participate in the exploitation of oil resources and develop domestic industry (Dag, 2010). The “ten commandments“ outlined ten areas of importance for the Norwegian government in the exploitation of their Oil resources. Norwegian petroleum polices throughout the 1980s and early 1990s followed the key Norwegian oil and gas policies that were developed in the early 1970s, thus there was a continued focus on national management and control of petroleum resources. (Ole Gunner, 2014). The objective of this nationalist strategy was to nurture and encourage Norwegian petroleum companies through information exchange, technology transfer and skilling to build the capacity for Norwegian companies to develop the petroleum resources. While these multinational firms were also intended to play an important

long-term role, the focus of petroleum policy during the 1980s was the goal of building up a Norwegian oil community.

To date, the petroleum licencing system is based on the policy of State direction and control. This had its genesis in the early 1970s as Norway debated what form the State control and participation would take; There also exists a policy of internationalization spearheaded by Statoil as operator and participant in international oil fields.

The early era of the oil industry in Nigeria was characterized by foreign control and non-participation by the Nigerian State, which instead, simply collected rents and taxes. This era had its roots in the first oil exploration work by the German Bitumen Company based on a 1914 colonial Minerals Oil Ordinance granting to British personnel and companies the monopoly of oil concessions in Nigeria (NNPC- Nigerian National Petroleum Corporation, 2015). This was quite natural since Nigeria was a commonwealth British colony at that time. The presence and the involvement of these companies depict the fact that Nigeria as a state did not have both technical expertise and a mature system of its own governance of the Oil resource. Hence Nigeria relied on the expertise of the International Oil Companies.

While Norway benefited from having some industry experience and a mature industry supporting the economy way back before the oil was found, this was certainly not the case for Nigeria, which was not only overwhelmed with its new found riches but the characteristic of its political economy saw competition among its own people to gain a bigger share of the "oil pie." (Ole Gunner, 2014). From the onset, Norway was also very careful in separating State's interest and the commercial interest of its NOC, which has become an epitome of its petroleum sector governance. Nigeria on the other hand, focused more on restructuring its NOC to serve as a means of siphoning "the oil rents"

it generated, than on looking at the bigger picture and propelling the NNPC in competition with the IOCs.

Based on these arguments, it is important for Kenya to put in place policies that will guide the exploration and final production of Oil to ensure sustainable livelihood. These include: Policies on environmental sustainability, policies on social licensing operations as well as polices to ensure Oil revenue translates to livelihood transformation.

2.9.2 Institutional Design and Organization in the Oil Industry in Norway and Nigeria

To ensure that the petroleum industry takes important public interests into account and that resources are utilised as effectively as possible to the benefit of both the State and the IOCs, the Norwegian government has designed and organized the petroleum industry with clearly defined and well-coordinated areas of responsibilities.

According to Mommer (2002), Norway is well known for an administrative system in which it assigns petroleum industry functions to three distinct state-controlled institutions, each with its own distinct role: First, there is the policy making body, the Ministry of Petroleum and Energy (MPE), which works with the country's political leadership in setting goals for the sector; Second, there is the regulatory and technical advisory agency, the Norwegian Petroleum Directorate (NPD), whose main responsibility is to set petroleum regulations related to petroleum resource management like licensing and even collecting fees from operators; Third, there is the commercial entity, National Oil Company (NOC), Statoil, which today carries out extensive oil operations both in Norway and abroad.

Nigeria has also tried to design its Oil sector with formal organizational similar to that of the Norwegian Model: Department of Petroleum Resources (DPR); Federal Ministry of Petroleum Resources (FMPR) and the Nigerian National Petroleum Corporation (NNPC) (Thurber, 2010). Federal Ministry of Petroleum Resources (FMPR) is the government administrative arm that deals with policy formulation and provides the general direction to other agencies in the sector for the exploration and production of petroleum resources. It also oversees all other sectors including downstream, midstream and oil services.; Department of Petroleum Resources (DPR) functions as the official industry regulator, with the responsibility to oversee or supervise the activities of all companies licensed to operate in the industry; keeping and updating records on petroleum industry operations; ensuring timely and adequate payments of all rents and royalties to the government; promoting and monitoring progress towards the enhancement of local content (or indigenization) of the petroleum industry; and, providing appropriate technical advice on oil industry matters to the government; The NNPC is a sector manager and quasi regulator of the petroleum industry through National Petroleum Investment Management Services (NAPIMS), with secondary responsibilities for upstream and downstream development.

Norway has been diligently building technical capacity in the petroleum sector, both in administrative sense and on the technological front, while Nigeria has mostly failed to do so (Mommer, 2002). Whereas Norwegian institutional design and organisation have financial resources and technical capacity to competently contribute in the management of petroleum resources in the country, Nigeria's institutional design and organisation lack both the financial resources and technical capacity to competently contribute in the management of petroleum resources in the country. Therefore, Norway is a country that can be considered to have the most mature, robust, and effective nationalized

petroleum sector that has indeed implemented separation of functions in managing its petroleum resources. On the contrary, Nigeria has tried to separate regulatory and commercial functions in oil sector but has been unable to robustly establish such a separation in anything other than in a strictly formal sense (Ole Gunner, 2014). Kenya has therefore to establish a sound institutional and legal framework that will provide the EIs a conducive environment for its maximum operations as well as establishing a profound rapport with the host communities. Such institutional framework should be one that enables the oil exploration lead to sustainable livelihood for the host communities through meaningful and community-led CSR activities.

Oil exploitation and production are subject to high risk, changing economic and technological environment. It is necessary for both the State as regulator, and the companies who perform the petroleum activities, to be able to adapt to new conditions over the period of a petroleum licence, which may span twenty years or more. Therefore, it is important to establish a regulatory legislative framework that balances the need for flexibility and stability with the State's petroleum policy objectives.

2.9.3 Model Agreements in the Oil Industry

Contractual Agreement

In the contractual agreement, the host government retains the ownership rights on the petroleum and shares the petroleum production with the contractor in kind or in cash. There are several forms of the contractual agreement and these include Joint Ventures (equity joint ventures and contractual joint ventures), Production Sharing Agreements and Service Contracts.

Joint Venture

Joint ventures exist in dual form; incorporated (equity) joint venture and contractual joint venture. In the incorporated joint venture, the host government (or its national oil

company) and the foreign oil company form a joint operating company in which each of them often owns about 50 percent of the shares (Collier, 2010). Although the host country has formally equal say in the management of the joint venture, in practice the foreign company has the upper hand on technical management. On the other hand, there are no provisions for sole-risk operations and this, therefore, means that the two owners have to agree on what constitutes a commercially exploitable discovery. Despite equality in ownership, the foreign company may bear the entire risk of exploration expenditure and have no possibility to recover that cost unless a commercial discovery is made. Based on this argument, the researcher opines that the Kenyan case is esoteric in the sense that there does not exist any equal partnership since the foreign Oil Company is the sole operator and thus sole bearer of all risks.

In the contractual joint venture, the partnership between the government and the foreign oil company is not incorporated into a joint stock company. Consequently, it does not assume a separate corporate entity and the relations between the parties are governed by the terms of the partnership contract (Daniel, 2013). The petroleum produced is thus not jointly owned; each party owns its respective share of the oil produced at the wellhead and is free to dispose of that share as it sees fit. Management of operations under a contractual joint venture is entrusted to a non-profit making joint stock company that has no balance sheet and is not subject to taxation. Since the exploration risk is borne solely by the foreign partner, the operating company acts as its agent during exploration while it acts on behalf of both partners during development and production.

Production Sharing Agreement (PSA)

Perhaps the most common type of agreement worldwide is the so-called Production Sharing Agreement (PSA), also referred to as Production Sharing Contract (PSC).

Revenue sharing between the host-state government and the investor is determined by arrangements for sharing petroleum production volumes between the two, as spelled out in the PSA (Danie and Goldsworthy, 2010). The basic principle in this agreement is that the recovery of cost as well as the profit sharing between the contractor and the government takes place in the form of gaining access to agreed portions of the crude oil that is produced and saved by the contractor. The investor does not own total production but only its entitlement under the PSA. As a result of these legal structures, the investor can book only a share of the total reserves.

The PSC design entails that the host country appoints a competent International Oil Companies (IOCs) as a contractor to develop petroleum activities in a certain region. The IOC assumes all the risks in the project and is solely responsible for developing the project. The production, if any, belongs to the host country (Duval *et. al.*, 2009). In this agreement, therefore, the state remains the custodian of the oil resource and is represented by a national oil company. Through this, the government has the option to partake in the exploration and production in different forms. With this form of contract, the transnational oil company bears the absolute burden of exploration risk. It receives no compensation whatsoever when there is no oil discovery in commercial quantities.

The Norwegian model considers the entire lifecycle of the petroleum operations while the Nigerian seems a bit truncated and staccato. Whereas there is only one single streamlined licensing process for Norway since the country applies the JVs as model agreements, the process is complicated for Nigeria based on a variety of model agreements used in the country (Ole Gunner, 2013). Unlike in Nigeria, every petroleum development phase in Norway is carefully thought of, streamlined and transparent, which helps in assessing the risk and reward in each stage. For instance, the preliminary impact assessment ensures that petroleum operations do not disrupt or harm the

economic, social and environmental ecosystems of the acreage under consideration. For Nigeria on the other hand, the different model agreements and complex arrangement adds more burden to the already starved technical capacity and presents more challenges to value creation.

The Norwegian approach to regulate petroleum industry has enabled Norway to balance the needs of Norwegian society with the need to remain attractive to oil companies to ensure the sustainable development of petroleum resources. This approach is premised on the sustainable development of petroleum resources, accomplished through an integrated approach to petroleum regulation. In particular, by critically analysing model agreements and award of licenses as the regulatory tools used in the petroleum industry in Norway and Nigeria, the regulatory tools have encouraged sustainable development of petroleum resources in Norway. Based on the Norwegian experience of integrating sustainable development in the entire process from oil exploration to full production of Oil, it is worth for Kenya to adopt such approach so that the livelihood of people is improved right from the stage of oil exploration through full production of Oil.

2.10 Theoretical Framework

This study was anchored on three theories: Political Ecology theory, Malthusian Theory and Institutional Theory.

2.10.1 Political Ecology

Political ecology was first coined by Frank Thone in an article published in 1935 entitled “Nature Rambling: We fight for Grass”. Resource-based wars are rampant in developing countries. According to Paul Goldsmith (2013), competition for scarce resources in the form of water, pasture, land resources and livestock assets play a key

role in the conflicts between pastoral groups. This is typical of the continued conflict between the Turkana and Pokot.

Studies of ecology with a political content emerged in the 1960s when cultural ecology appeared as a field of influence in studies of human impact on the environment (Forsyth, 2013). Political ecology seeks to explain social and political conditions surrounding the causes, experiences and management of environmental problems. Political ecology is the study of the relationship between political, economic and social factors with the environmental issues and changes. Political ecology suited this study because the discovery of oil in Turkana impacted on the livelihood of the Turkana Pastoralist community from the various dimensions: social, political, economic and environmental.

According to Forsyth (2013), the major assumptions of political ecology theory are: Nature and society are mutually interlinked; Entitlements to access, control over, distribution of resources and representation rather than scarcity of resources lead to resource-conflicts; Environment is the arena of contested entitlements and cultural meanings; and Environment conflicts are social, cultural, economic and political. Forsyth (2013) identifies political ecology as an approach to environmental politics that allows the booming integration of political analysis with the formation and dissemination of understanding of ecology reality. The stress here is the importance of harmonizing both political issues with environment discourses that represent people and environmental problems which could be attained with the use of institutions.

People face unusual ecological circumstances when they have too much or too little resources and this exposes them to high risks of violent conflicts since they all would like in their own way to be owners, sole users and controllers of the available resources. Ross (2012) argues that resource abundance causes conflicts not because of their

ubiquity but that its contested use and the social institutions that shape the rules and rights of resource use should be the focus of analysis. In the face of conflicts then the natural resource wealth cannot translate to a positive transformation of well-being of the people.

To Robbin (2012), issues such as power relations in conservation and development plans, inequality and poverty, ethnicity in political ecology are time and again overlooked yet they relate more to processes of nature conservation, degradation and legitimization. Attention is thus on how poor people are affected by the actions of people in power, which results in politically influenced measures on the environment. This is a key issue that forms important approaches of knowing how a sustainable oil development can benefit all actors (Oil industry sector, private sector, government and host community in the long run). Access to and control of natural wealth plays a key role in whether the host communities will reap the benefits of the resource revenue and thus enjoy a sustainable livelihood.

In general, the stance for political ecology is to draw attention on the importance of integrating the categories of people and environment as any division may possibly be a starting point of oppressive policies based on coercive conservation. Steering roles to inform governing institutions about the latent diverse complexities that surround the environment, the people and development issues is what this study sought to achieve in order to enhance environmental management aspects and thus ensure that oil discovery brings about a positive transformation to the people of Turkana County.

Robbins (2012) sees political ecology as an inquiry into how politics affect the resource use and how unequal relations in and among the society affect the natural environment as well as the effect of decisions that communities make in the context of their political environment, economic pressure and societal regulations. Politicians are known to

incite local communities against the oil companies in resource-rich areas and the politicians have also been accused by the local residents to be the primary beneficiaries of the share given by the oil companies to the local community as compensation (Daily Nation, October, 2013). Hence the Turkana pastoralist community would seek to struggle through a reactionary movement so as to liberate themselves from the shackles of ecolo-political injustices from the oil multinationals.

Political ecology is therefore seen a measure that seeks to appreciate complex relations between nature and society through observant examination on means of access and control over natural resources and their implications for environmental welfare and sustainable livelihood. Consequently this calls for social institutional structures that will control the natural resources in order to avert conflicts that are likely to emerge.

Robbins (2012) posits these three elements as a practical applicability of the political ecology theory:

(a) To inform policymakers and organizations of the complexities surrounding environment and development, thereby contributing to better environmental governance.
(b) To understand the decisions that communities make about the natural environment in the context of their political environment, economic pressure, and societal regulations
(c) To look at how unequal relations in and among societies affect the natural environment, especially in context of government policy

On the other hand Bryant (2015) makes a critique of the political ecology theory based on these three fundamental assumptions: First, costs and benefits associated with environmental change are distributed unequally. Changes in the environment do not

affect society in a homogenous way: political, social, and economic differences account for uneven distribution of costs and benefits. Political power plays an important role in such inequalities; Second, this unequal environmental distribution inevitably reinforces or reduces existing social and economic inequalities. In this assumption, political ecology runs into political economies as any change in environmental conditions must affect the political and economic status quo; Third, the unequal distribution of costs and benefits and the reinforcing or reducing of pre-existing inequalities hold political implications in terms of the altered power relationships that are produced.

2.10.2 Malthusian Theory

"An Essay on the Principle of Population" by the Reverend, Political Economist, and Demographer, Thomas Robert Malthus (1766–1834), is perhaps the most important document ever published on population. Malthus principally addressed the relative rates of food production and population growth, observing that, human population grew exponentially and food production arithmetically. The growth in human population would outstrip resources and thus leading to scarcity of resources. Isham, J., Woolcock, M., Pritchett, L., Busby, G. (2003). This Malthusian argument was based on two assumptions that Malthus thought were innate and incontrovertible: First, food is necessary for humans to live; Second, the passionate drive between the sexes to procreate and "be fruitful and multiply," will inevitably lead to high birth rates and consequently population growth (Winckler, 2009). Malthus predicted that checks on population would come in two forms: positive checks that raise the death rate such as widespread famine, pestilence, and war and preventative checks that lower the birth rate including moral restraints such as birth control, postponing marriage, and celibacy. These checks would then help to reduce population.

Oil endowments have had the tendency to increase birth rate which leads to population increase. According to Madison (2007) a percentage increase in oil endowments causes a change in the population growth. The Malthusian model postulates that population is a function of fertility and mortality. Fertility rises and death rates fall when per capita income exceeds the equilibrium level (Becker and Rodrigo R. Soares, 2005). Malthusian model asserts that population growth rises as a result of high fertility as well as low death rates. The implications of Malthus' theory can be formulated mathematically, where the population growth rate is equal to births minus deaths plus immigration minus emigration. Because oil abundance can potentially affect population through deaths and net migration, the impact on standard birth rates can be confounded with other changes in population. Malthus had a profound influence on the fundamental demographic models that are still used to study humans and the millions of other plants, animal, and microbe species on the planet today. His observation that all living organisms have the capacity to produce more offspring than can survive was a cornerstone in the development of evolutionary biology. All populations that are unchecked, including humans, have the intrinsic capacity to grow exponentially.

Oil endowments lead to reduced female labour force participation, with large percentage of the expatriates being male workers in the oil sector. For example, in Qatar, population has an unusual sex distribution consisting of almost twice as many males as females, and the imbalance is the most prominent in the 15-65 age group and among the new migrants (Fargues, 2003). This renders women more of child-bearing responsibility. Deflating births by current population will therefore understate the impact on fertility because of the skewed current sex ratio induced by oil economy.

Malthus highlighted the pressure and difficulties faced by the human race as a result of population-induced pressure on food supply. According to Malthus, increasing

population pressure on food supplies would destroy humanity's perfection and result in global misery. If the growing population is not kept under control through preventive checks or measures, it will bring vice or misery to humanity (Brunnschweiler, Christa N. and Erwin H. Bulte, 2008). High population leads to poverty and consequently conflicts because there will be scarce resource that all will be competing to access and utilize (Ross, 2012). It is against this background that Malthus for positive and preventive checks to control the growing population. Malthus proposed positive and preventive checks to control overpopulation caused by an imbalance between population and food supply: Positive checks include: Disasters such as famine, earthquakes, vice, misery, disease, floods, and other natural disasters claim the lives of many people, raising the death rate in society. These are positive checks that nature implements to keep the population and food supply in balance; Preventive checks include: Preventive checks are man-made measures to keep the birth rate under control. Malthus mentions moral restraint and various birth control measures such as raising the marriage age, and celibacy among others as some preventive measures.

Malthusian Theory can be criticized on the following grounds:

(i) Malthus was of the view that food production increases in a very slow manner. It is so slow that at some point of time it will not be able to feed the growing population. But this is not correct in case of many developed nations. With the help of pesticides, HYV seeds, modern technology food can be produced in a huge quantity.

(ii) Malthus gave no proof of his assertion that population increased exactly in geometric progression and food production increased exactly in arithmetic progression. It has been rightly pointed out that population and food supply do not change in accordance with these mathematical series.

(iii) The Malthusian theory is one sided. It takes the increase in population as the result of a rising birth rate, whereas population has grown considerably the world over due to a decline due to death rates resulting from conflicts experienced

(iv) Malthusian theory is based on the Law of Diminishing Returns, which states that the total output of a plot of land decreases with each additional application of labour and capital. Malthus failed to consider the possibility of scientific advancements in agriculture, which could result in increasing rather than decreasing returns.

(v) The spread of literacy, as well as the growth and development of culture, tend to limit population growth in a country. Overpopulation in a country is exacerbated by illiteracy and a lack of proper education. However, Malthus overlooked these issues as a means of population control.

(vi) Malthus proposed a number of unnatural means and methods for limiting population growth. If these are truly followed, human behaviour will undoubtedly become abnormal. Any increase in population, according to Malthus, was undesirable. However, because man is a source of labour, a large number can sometimes imply greater wealth, power, and strength. Malthus, in his theory, has overlooked this issue.

(vii) The Malthusian approach to population is solely based on the population-to-food-supply relationship. However, he has overlooked the fact that population is determined not only by food supply, but also by the country's overall wealth. Even if a country is materially wealthy but lacks sufficient food production, it can feed its people well by importing food in exchange for its product or money.

2.10.3 Institutional Theory

Institutional Theory recognizes the value of institutions in proper management of natural resources especially with regard to regulating human interactions on access, control and utilization of natural resources. Resurgence of the Institutional Theory can be traced back to the 1970s where investigations were founded on how institutional contexts affected organizational structures (Meyer &Brown, 1977). First attempts at expounding the institutional theory go back to Max Weber and Emile Durkheim whose concern were how institutions are and influence action and structures (Greenwood, 2006). Max Weber was concerned with how institutions provide meaning to interpreting human actions whereas Durkheim looked at institutions as symbolic systems: knowledge, belief and moral authority derived from human interactions. This therefore means that institutions play a vital role in the life of the people.

Institutions are made up of formal constraints (such as rules, laws, routines and constitutions), and informal constraints (such as norms of behaviour, conventions and self-imposed codes of conduct) and their enforcement characteristics (Reed, 2009). Countries adopt and execute formal and informal constraints over time. It is through the established institutions that countries are able to ensure autarchy for their citizens and safety of property. Institutional theory suits this study because we need good institutional framework for the better management of oil found in Lokichar Basin to translate to sustainable livelihood of the people of Turkana County and thus spur development in Lokichar Basin.

Institutions are a means of enhancing livelihoods as they bridge the gap between the asset portfolio and the livelihood outcomes. Thus, robust institutions have a crucial role to play as they can boost resilience to vulnerability and help safeguard the livelihood of the local community. For the case of oil exploration in Kenya, institutions here would

refer to government institution and civil society organization. According to Melham *et al*. (2006) nations with weakened and less pushy institutions are more liable to undergo negative aspects of resource curse. For natural resources and economic growth, institutional theorists argue that poor governance manifested through weak institutions is a major factor for what is known as the natural resource curse phenomenon.

This could be partly the reason why Botswana a less corrupt country has had to pay much attention in having and building high levels of institutions to support the country (CIA, 2012). Strong institutions can help to avert the negative effects associated with resource use and hence turn the natural resource wealth a blessing. Institutional theory can be decomposed into three pillars: Cultural-cognitive pillar, normative pillar and regulative pillar (Peters, 2005). Cultural-cognitive pillar lays consideration on how institutions make individuals in a society conform to behaviour in relation to communal ideas of social realism which structure meaning to commonly expected outcomes. Reed (2009) asserts that cultural-cognitive pillar stresses shared conceptions that constitute nature of reality and the frames through which the meaning is made. This pillar is therefore a relational pillar that serves to guide the relationship between Oil Co. and the host communities for peaceful co-existence in order that oil exploration leads to improved living standards in Turkana County. This study, therefore, suggests that EIs in communities of the LDCs could tap into the institutional frameworks enshrined in the local social structure, to develop a comprehensive and effective approach to managing company-community relations. This approach will grant a conducive environment for the operations of the EIs. This becomes a good ground to gain the Social license of operation. On the other hand the host community benefits from the oil exploitation activities for sustainable livelihood.

The normative pillar aims at desirable goals by focusing on how things should be done (Peters, 2005). It prescribes rights and privileges as well as responsibilities and duties. This pillar spells out the entitlements of the host communities in terms of what they should expect from the natural resource wealth and it really becomes a tool for managing community expectations. However, this pillar also holds the Oil Co. and other active stakeholders (government) responsible in ensuring that oil exploration leads to sustainable livelihood. Consequently, corporate social responsibility becomes a responsibility (obligation). This study argues that it is fundamental that EIs understand the culture-based institutions enshrined in the social structure of host communities so they could use such knowledge to their advantage to design the most suitable community relations approach specific to meet the interests and expectations of stakeholders.

The regulative pillar deals with producing rules that must or ought to be observed (Scott, 2001). This pillar touches on upholding social law and order and thus it constrains and regularizes behaviour through reward and punishment. This provides a legal framework that gives primacy to the rule of law. Institutional theory has been used in this study to have a complete understanding of how strong institutional framework can drive actors (Oil Co. and host communities) as well as local coherence in governing actions to bring about good governance of the natural resource wealth. The local rules, shared values, norms and practices within the institutional framework shape communities' interests and expectations and the demands and claims the stakeholders make. Therefore, it is important that EIs must localise their business models, practices and approaches to conform to local rules and values prevalent in the community where they operate.

To Robinson (2012), quality institutions are crucial in influencing developmental outcomes and assessing conflict risk given that they effect of institutional pressure, to be capable of preventing misuse of resources. Taking on examples from Angola and Democratic republic of Congo, Reed (2009) demonstrates that oil extraction compromises livelihood of communities leading to distorting effects particularly in the absence of institutional control structures which undermines democratic accountability and equitable development. To attain more fair development and empowerment of individuals and marginalized groups, stronger social institutions is now a requisite to ensure that resource wealth brings about better quality of life for host communities.

The Sustainable Livelihood approach harmonizes the institutional theory by drawing attention to the essential role played by institutions, which establish how people can access diverse forms of capital (resources) and use their assets (resources) in advancing sustainable livelihoods (Glavovic *et al.*, 2007). It is through a profound institutional framework that natural resource wealth will translate to sustainable livelihood. Such institutions will form the mechanism for benefit sharing that brings to fruition the trick-down effect in development.

The major criticisms of institutional theory have been:

a) Its assumptions of organizational passivity and its failure to address strategic behaviour and the exercise of influence in its conceptions institutionalization;
b) Autonomy- A concern with the capacity of institutions to make and implement their own decisions. Arguably, to the extent that they are not dependent upon another organization or institution they can be said to be institutionalized. This concept might be operationalized in terms of budgets and autonomous sources of revenue;

c) Adaptability- the extent to which an institution is capable of adapting to changes in the environment, or more importantly capable of molding that environment.

d) Complexity- the capacity of the institution to construct internal structures to fulfil its goals and to cope with the environment.

2.11 Conceptual Framework

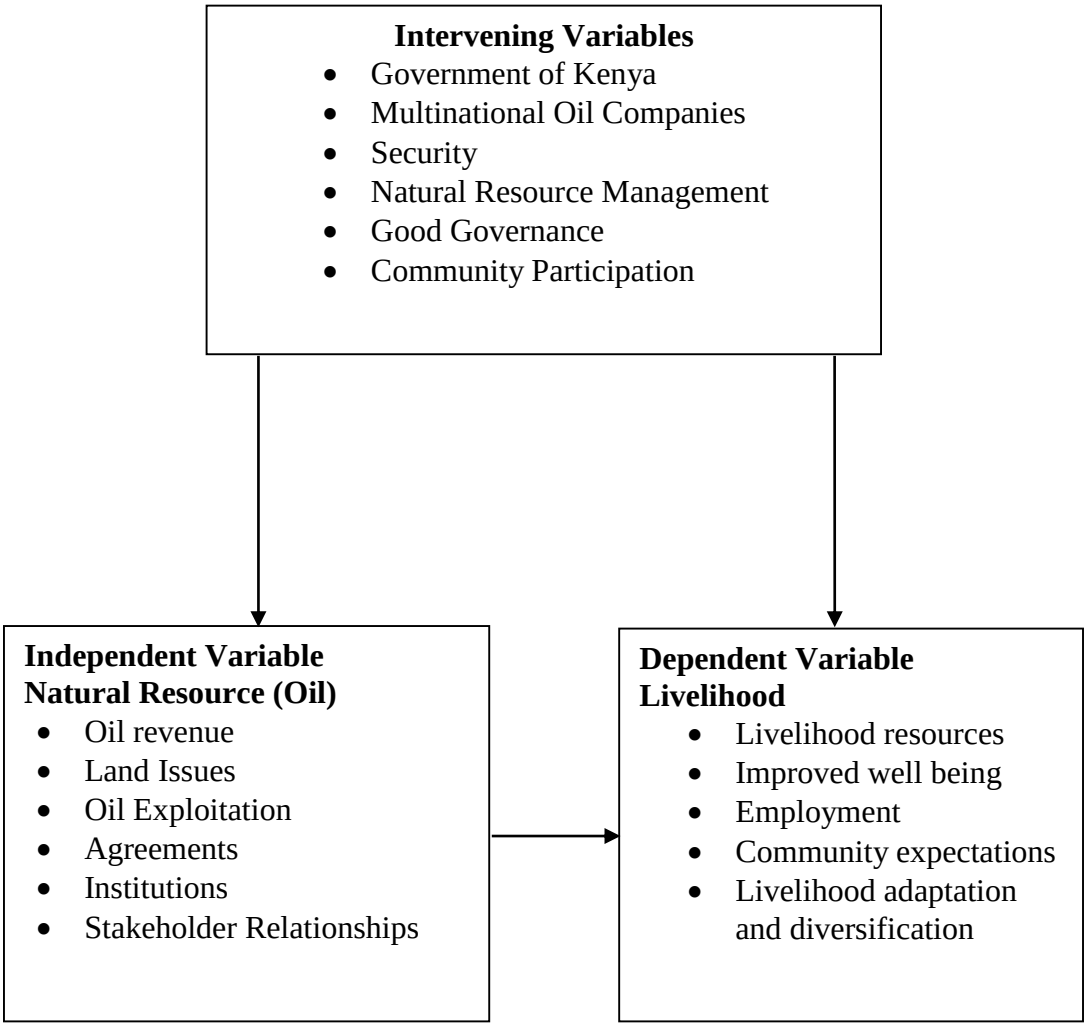

Figure 2.6: Conceptual Framework
Source: Researcher, 2017

The Conceptual framework shows that Oil exploitation (Independent Variable) in Lokichar Basin has its cost implications and reveals the quality of oil finds. The oil revenue is expected to spur development and bring about sustainable livelihoods depending on the relationship of the major actors (GOK, Oil Co. and the host

communities). The local community needs to be given a reasonable share in the production sharing agreements and a good relationship between all the different stakeholders is necessary to avoid conflicts. Consequently, the natural resource wealth will lead to better livelihood to the host communities. This calls for a proper regulatory framework which is emphasised in the normative pillar of the institutional theory that calls for sound expression of the rights and privileges of the relevant parties (Local community and investor).

People's livelihood is the dependent variable. The host community expects that Oil exploitation will bring about improvement in their livelihood. This would be manifested through employment creation, business avenues, fiscal expansion, income and provision of social amenities. For oil resource found in Lokichar Basin to be able to improve the standards of living of Kenyan citizens, there is need for transparency, Community involvement in resource management, good governance and strong institutions. When the local residents are excluded from enjoying these rights and in the event that there is no payment of commensurate compensation for local residents for losing the land to the oil company, the local residents decide to use physical force to claim their rights and compensation. Local community participation in the activities of the EIs represents the cultural-cognitive pillar of the institutional theory which calls for a good rapport that promotes shared perception. This also implies respect of the local community leadership and the use of local leadership structures for a better relationship and a shared vision.

The local residents need to be involved in the decision-making process throughout the process of oil exploration in terms of compensation given to them and even projects to be done to give them a sustainable livelihood after losing their ordinary source of livelihood (Dolan, 2014). Exclusion of the local residents in the decision-making

process in the natural resource management breeds mistrust and eventually triggers conflicts. Transparency and accountability will bridge the gap of information and hence help build good relationship between all the stakeholders involved in the extractive industry. This is an echo of the regulative pillar in the institutional theory which calls for respect of the rule of law.

2.12 Conclusion and Research Gaps

This chapter explored literature on Oil exploitation to enhance livelihood and thus bring about sustainable livelihood. This was based on literature found in books, journals, internet and even newspapers. The study was generally anchored on the institutional theory that can lead to proper governance of natural resources, especially Oil, for sustainable livelihood and thus stress was put on the need for strong institutional framework to ensure that Oil exploitation in Lokichar Basin turns out to be a blessing and thus lead to improved well-being of the host community. However, the institutional theory was not sufficient to answer the question of weak governance in our case where there is a weak democracy and lacks sound autonomy of the institutions of justice. For this to come to fruition there is need for proper separation of powers of governance with clear cut distinction and autonomy between judiciary and the other arms of power: executive and legislative.

The literature review on natural resource reveals the availability of a number of natural resources which can be used to improve the quality of life of the pastoral communities in Turkana County (Turkana County Government Report, 2015). Even then, a gap in this study pertains to how appropriate strategies can be devised to effectively utilize these resources for sustainability of the livelihoods for the benefit of the Pastoral communities living in the areas near Oil camps. There is still limited opportunity for livelihood diversification strategies in Turkana County given the rigid mentality of the

pastoralist communities with a fixed belief in supremacy of pastoralism. This is also clothed with the lack of technical know-how and financial incapacitation in the region.

Community-based natural resource management approach has been a useful lens for proper engagement and involvement of the local communities in matters pertaining sustainable development (Turner, 2006). The gap in this study is the low education levels in Turkana County which renders this approach inefficient. This means then that the pastoralist communities living in the region of oil exploitation are easily manipulated in regard to decision-making and thus not able to fully take part in development issues with free informed consent. This becomes a hindrance to a proper stakeholder engagement with few elites taking advantage of the many uneducated community members.

The review of this study's literature further reveals that the Pastoralist communities in Lokichar Basin have high expectations that oil exploitation will change their standards of living, that is, from being a poor community to a wealthy community financially; from underdevelopment to robust infrastructural development (Asamoah, 2011). The gap here is lack of proper mechanisms for ensuring that proceeds from oil exploitation activities are utilized for sustainable livelihood. The other gap emerging from this literature review is lack of strategies for managing local community expectations. Management of expectations of the local community is key in ensuring conducive environment for operations of the Oil companies in the region.

The literature review of this study pointed out environmental degradation as a hindrance to oil exploitation in Lokichar Basin (Ross, 2012). However, there is lack of policy on environmental impact assessment report form oil companies and integration of environmental studies in the education system. Environmental education should be made an integral part of curriculum so that environment is held as a mainstream

education issue. This is key in awareness raising and need to ensure environmental sustainability.

Turkana County is the poorest county in Kenya. Poverty remains the single most critical barrier to social-economic development of any country. Poverty in rural areas has led to overreliance on natural resources, which translates into unsustainable use of natural resources and overall degradation of the environment. This is manifested in practice of charcoal burning as a livelihood diversification strategy as well cutting trees to erect camps for oil-related activities. There is great need for strategies on poverty in order to achieve sustainable livelihoods.

The exploitation of oil in Lokichar Basin has led to population increase with people coming from all over Kenya in search of employment opportunities as well as business to make a living (Yates, 2012). The growth in human population has increased pressure on the resource base. The scarce resources are competed for by the large population. For example, land for pastoralist communities is competed for use for both oil-related activities and for human and animal consumption. Water, an important resource, is also needed by both the EIs and the local community for both human and animal consumption. Land is also in danger of over exploitation due to the need for settlement for the people coming to the region owing to oil exploitation. The danger here is the "tragedy of the commons". One important outcome of sustainable livelihood is natural resource base sustainability. Therefore, there is need for enforcement of legislation at all levels that is family, local, community and national to ensure sustainable use of natural resource endowed to Turkana County.

This study reviewed literature on Sustainable livelihood, with a particular reference to the Sustainable livelihood framework (DFID). Even though contexts of vulnerability have been highlighted to be critical to Sustainable livelihood, the concept of

vulnerability contexts, particularly disaster, has been ignored. Turkana County is prone to natural disasters: Floods and droughts that come interchangeably. Therefore, there is an urgent need to conduct studies on Sustainable Livelihood in Turkana County within the context of the exploitation of Oil that threatens the primary economic activity of the pastoralist communities in Lokichar Basin.

Despite the growing number of studies on relevance of natural resources on rural livelihood, these studies are either more focused on women empowerment or on oil exploitation and its implications on fishing or effects of oil exploitation on a community of hunters or the contribution of mineral resources like diamond and gold on urban settlements or are more geographically biased in that they are concentrated in urban areas. Little has been done on how oil exploitation impacts on pastoral communities living in the rural areas.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

The key issues discussed in this chapter include: Research design, research methodology, sampling design and sample size, target population for the study, and research instruments that were used in the study, reliability and validity of the study, ethical considerations for the study, the data collection procedures and the procedure that were used in analysing data collected.

3.2 Study Area

3.2.1 Physical and topographic features

Turkana County, located in the North-Western part of Kenya, is the second largest of the forty-seven (47) counties in the Republic of Kenya, covering an area of 77,000 square kilometers and lies between Longitudes 340 30’ and 360 40’ East and between Latitudes 10 30’ and 50 30’ North (GOK 2009). Turkana County borders Uganda to the west and South Sudan and Ethiopia, to the north and northeast respectively.

Turkana County has eight (8) sub-counties as seen in Figure 3.1, which is the map of Turkana County. These sub-counties are:- Turkana North, Turkana West, Loima, Kibish, Turkana central, Turkana south and Turkana East sub-county. It has thirty (30) political wards whereby each one being headed by a member of county assembly. Turkana County hosts refugee settlements at Kakuma and Kalobeyei in Turkana west Sub-County under the United Nations High Commissioner for Refugees (Turkana County Government Report, 2015).

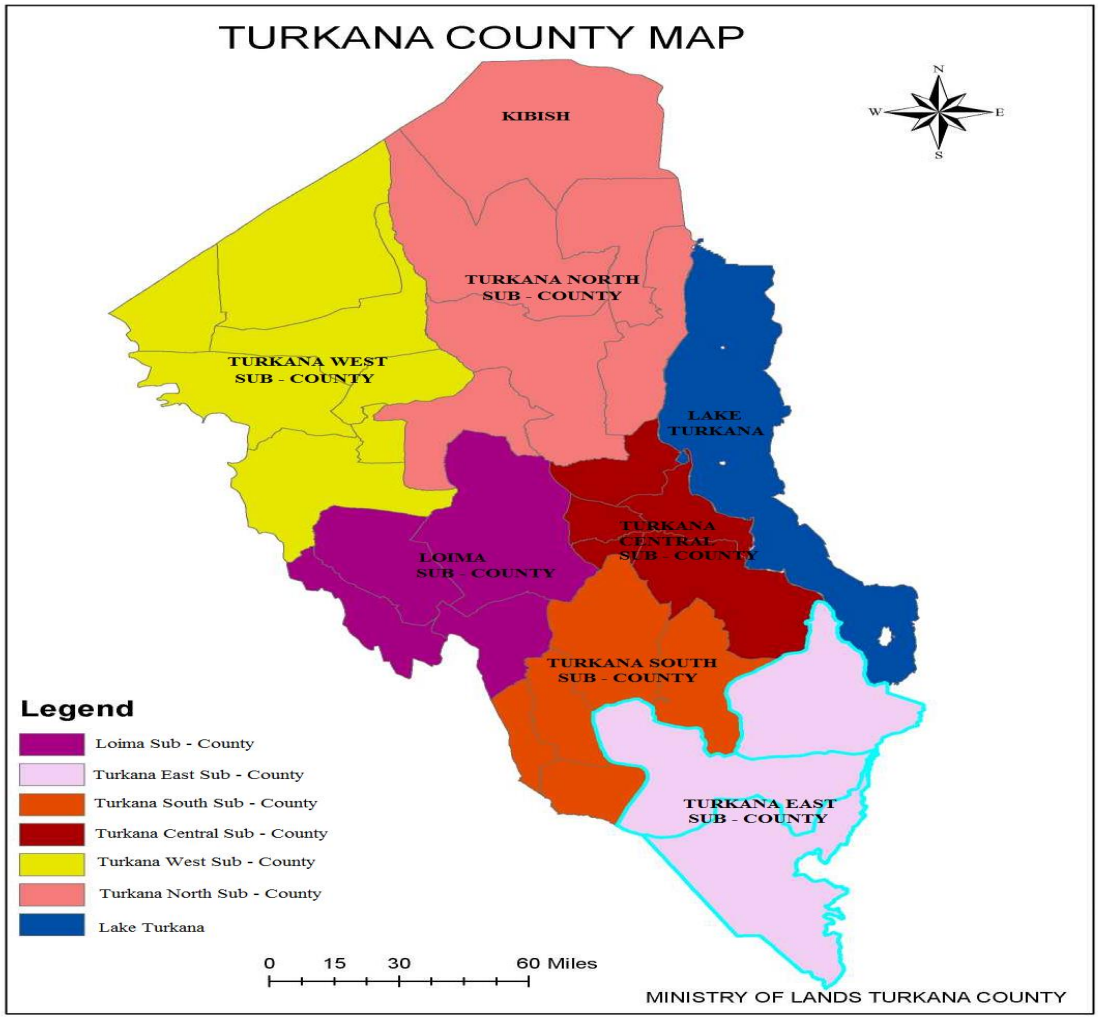

Figure 3.1 Map of Turkana County
Source: Turkana County Government Report 2015

The physiographic features in the county include low lying open plains, mountain ranges and river drainage patterns. The main mountain ranges of the county are Loima, Lorengippi, Mogila, Songot, Kalapata, Loriu, Kailong'kol and Silale mountains (County Annual Development Plan 2020-2021). These are natural resources which need to be appreciated first and then appropriate ways of mobilization be applied. These mountain ranges are normally green, covered with dense bushes and high woody cover.

There are also hills in the county namely: Tepes Hills in Kibish Division, Lokwanamoru Hills and Lorionotom Hills in Kaikor Division, Pelekech Hills in Kakuma Division and Loima Hills in Loima Division which are characterized by large forests. The open lying

plains consist of the Kalapata and Lotikipi Plains (Turkana County Investment Plan 2016-2020). The plains form part of the arid area in the County and receive the lowest amount of rainfall of around 180 mm per annum. The topography of the study area provides a wide range of resources which needs to be properly utilized improve the quality of life of the Turkana people.

Lake Turkana, found in Turkana County, is the largest and most saline of the Rift Valley lakes. There is no outlet, and with reduced inflows and high evaporation, this results into depositing of salt in the soil and capping on the surface. The lake is situated on the eastern part of the county, has northern island, and is endowed with a variety of wild animals namely: hippos, crocodiles and waterfowls.

Turkana county road network is poorly developed. The county has a total road network of 5,496.2 km of which 488.5 km are bitumen, and 5007.7 km earth surface. The challenges faced by this sub-sector include seasonal rivers that cut through roads and poor soils that increase the cost of road construction and maintenance. As a result, a number of roads are rendered impassable during the rainy seasons. Air transport in the county is not developed as well. There is only one airport in Lokichogio and 22 air strips across the county. Lodwar air strip runway is tarmacked while the rest are just levelled grounds whose runways are not tarmacked.

3.2.2 Climatic conditions

Turkana County is arid and semi-arid and is characterized by warm and hot climate. The temperatures range between 20ºC and 41ºC with a mean of 30.5ºC, (Desta, 2003). The rainfall pattern and distribution are erratic and unreliable with both time and space. The rainfalls in brief violent storms resulting in flush floods. The surface runoff and potential evaporation rates are extremely high. Due to the low rainfall and high

temperatures there is a lot of vapor-transpiration resulting into deposition of salt in the soil and capping on the surface.

The rainfall pattern and distribution are erratic and unreliable both with time and space (Turkana County Government Report, 2015). There are two rainfall seasons. The long rains usually occur between April and July and the short rains between October and November and ranges between 52 mm and 480 mm annually with a mean of 200 mm. The driest periods are January, February and September. The rainfall is distributed on an east-west gradient with more rainfall in the western parts and points of higher elevation.

3.2.3 Demographics

According to the Kenya Population and Housing Census (GOK, 2019) results, the County population stood at 926,976. It is projected to have a total population of 1,036,586 in 2012 and 1,427,797 in 2017. These projections are based on a population growth rate of 6.4 percent assuming constant mortality and fertility rates. The increase in the overall population will call for more investment in economic and social facilities such as health services, educational facilities, agriculture and livestock sectors to provide food and employment opportunities. The population of the Turkana community is shooting up steadily partly because of the advent of the Oil industry among other factors. This implies that there is need for proper governance of natural resources so as to reduce the pressure that will be exerted on the limited resources as a result of population growth.

The average population density in Turkana County is 12 persons per km^2. This is based on the 2019 Kenya Population and Housing Census. Settlement patterns in Turkana County correspond with natural resource endowment. This is exhibited by low population densities in the rural areas and high population in towns and market centers

where economic opportunities prevail. Turkana Central has the highest concentration of people because it is the County headquarters and has many infrastructural and social amenities whereas Turkana East has the smallest population density because of the insecurity levels in the area, mainly related to resource-use.

3.2.4 Economic conditions

Turkana County is considered the poorest of the forty-seven counties in Kenya. Statistics from the Commission of Revenue Allocation indicate that nearly 92 percent of the population lives below the poverty line, earning less than two US dollars per day. Major source of livelihood in Turkana County revolves around livestock: Cattle, camels, donkeys, sheep and goats are the main animals being kept by pastoralists (Devereux, 2010). Fishing is practiced in Lake Turkana with Nile perch and Tilapia being the main fish species found in the lake. Fishing hub of Turkana is Kalokol at the shores of Lake Turkana. Basket weaving is also a major income generating activity especially among women in Lodwar town.

Through Devolution, Agriculture has been introduced with crop production in irrigation schemes along Kerio and Turkwel rivers though still under subsistence farming. Crops grown include sorghum, cowpeas, maize and assorted vegetables. The discovery of commercially viable oil in by British oil firm, Tullow Oil in South Lokichar basin, Turkana South in 2012, brought with it optimism of economic development out of revenue from oil export.

Turkana is the original home to mankind with archaeological evidence confirming that man existed in Turkana for over 2000 years ago. Turkana has been Africa's most known but seldom reached destination (Turkana County Integrated Development Plan 2013-2017). It needs no much introduction to the tourism industry having been made famous by the early explorers. The type of tourism that can be developed in the County will

largely make use of this type of Landscape and environment. Turkana County has attractions whose potential can only be classified as world class. Not in any order can be clustered as follows:

(a) Cultural Tourism- Material and contemporary culture, Artefacts and Handicraft industry. The Turkana Community has a rich and distinct culture that stands out from the Kenyan scene. Packaged and marketed, this forms a strong basis for a community based Cultural Tourism. The now annual "Turkana Festival" on the South Eastern shores of Loyangalani rode to its fame by riding on the already strong brand name. The main Turkana land in the Western shores offers a big handicraft market especially at Lodwar Town and environs.

(b) Historical Tourism- Associated with the Country's struggle for independence- one of the must visit destination for the Domestic Tourist are the famous Kenyatta prisons in Lodwar and Lokitaung. The County is also the home of the refugee Southern Sudan Community and other African nationals who have fled their countries for various reasons. As a result, a large refugee town of Kakuma and an international Airport of Lokichoggio was born.

(c) Transit Tourism-As a frontier district and the route to Southern Sudan and the North Eastern Uganda provide an ideal stopping point for travellers. The coming of the East African Community puts this potential at a higher level. Locations all the transit townships from Kainuk (entry point from Kitale) to Kakuma/Lokichoggio (gateway to South Sudan) Lokiriama (Gateway to Northern Uganda and Lokitaung (gateway to Ethiopia).

(d) Desert Tourism- Popular amongst 4WD enthusiasts Turkana is a dreamland for desert Landscape Safaris and Wide open spaces expeditions is a niche market that fully exploited may turn the fortunes of this County. Locations like Lotikipi

plains and the Southern Turkana Sand dunes. This is the only feature that makes a country like Dubai a popular destination after its duty free shopping!

(e) Filming and photographic destination- Turkana county is picture perfect for outdoor photographic location so much that it is has been used for numerous commercial advertisements such as- “Niko na Safaricom” images. Big screen movies such as the “Mountains of the moon” and many others that may have also been shot in the past. The residents themselves have never utilized this attribute.

(f) Paleo-Archeology Tourism- Fossil evidence found in the earth around Turkana suggests that humans have survived these conditions for a very long time- and that Turkana is the true “Cradle Of Mankind”. The Turkana boy of Nariokotome is a well-known fossil as Lucy of Ethiopia. The Turkana Basin Initiative field school is the world’s top facility and based in Turkana. A tourist attraction in itself and training global future archaeologists managed and directed by the world’s renowned Archaeologist Dr. Richard Leakey.

(g) Big game Fishing- The Nile Perch and oversized Tilapia found in Lake Turkana is the wild dream destination for any sport fisherman. This is a big underutilized fishing destination.

(h) Wildlife and Bird watching- The South Turkana National Reserve, The Lotikipi ecosystem, the Suguta Sand dune and desert landscapes, The Kerio/Turkwell Deltas, The Island Parks World Heritage Site are some the most spectacular sites in the County. Of all these, the Naboyotom Volcano at the Southern tip of Lake Turkana is the icon feature of the County.

(i) Resort City development- The paradigm shift and a fast forward approach in the leisure industry is the one stop cities development trends currently sweeping

across Africa. Turkana has been chosen to host one as the flagship projects of the Kenya vision 2030 (Lake Turkana Resort City). The location is most likely to be an appropriate site on the shores of the Lake Turkana or a desert landscape hinterland. This development will be taken with a lot of caution to help this destination retain its serenity. The Resort City will be adjacent to world famous Eliye Springs, whose constant water have been proven to have healing properties thus the suggestion that the Resort City be christened the 'Healing City'.

(j) The newly discovered Oil fields are a potential attraction. Any curious traveller may want to see for himself this phenomenon hitherto restricted to the remote and distant lands of Arabia and the Middle East. Professionally guided tours to these *"Ngamias"* can be provided as a unique product in the Lokichar basin.

Here is a list of tourist attraction sites in Turkana County as found in the County Annual Development Plan 2020-2021:- Central Island- an island in the middle of Lake Turkana is one of three crater lakes with thousands of flamingos and is a breeding ground for crocodiles. The island is also protected as a national park.; Eliye Springs Beach, Lake Turkana- situated just 50km from Lodwar town, sandy beaches, palm trees and a laid back atmosphere; Kalokol Standing Stones- known in Ng'aturkana as 'Namorutunga' meaning 'people of stone'. Legend has it that the stones are remains of people who were cursed and into stone by an angry sorcerer. Situated along the Lodwar-Kalokol road, Namorutinga is a mythical and a place of worship suspected to be two centuries old; Hot waterfalls of Kapedo- a natural hot waterfall of the Suguta River in Turkana East; Tobong' Lore, Turkana Tourism and Cultural Festival- an annual festival first held in 2014. A celebration of the rich culture of the Ateker communities found in three countries but share common ancestry and language- Turkana (Kenya), Karamoja

(Uganda), Toposa (South Sudan), Nyang'atom (Ethiopia); regional integration and peaceful coexistence.; Nariokotome Turkana Boy Monument- the site of archeological discovery of a near complete skeleton of an approximately 1.6 million year old Homo erectus in 1984 by Dr. Richard Leakey. In its place a monumental pillar and a brass replica of the Turkana boy was erected; and South Turkana National Reserve- a hidden gem along the Lodwar- Kitale Road and one of the least visited game reserves in the country

Lokichar Basin

Lokichar Basin is found in Turkana County. It is a thinly populated area with about 226,000 people (Kenya open data, 2014). The basin has poor infrastructure and some areas are hard to reach especially when it rains due to the poor road network. Lokichar Basin experiences unreliable rainfall. The main economic activity of the people in this region is pastoralism. They keep livestock such as goats, Camels, Donkeys, Sheep and Cattle. With their ownership of livestock, the region is prone to pastoral conflicts (Cattle raiding) from the neighbouring community (Pokot). Hence Lokichar Basin is already an insecure region. These conflicts have been exacerbated with the discovery of oil in the region. River Turkwell and River Kerio are the main streams flowing through Lokichar Basin. With these rivers, the local people practice farming through irrigation and grow crops like millet, maize, sorghum and vegetables as well.

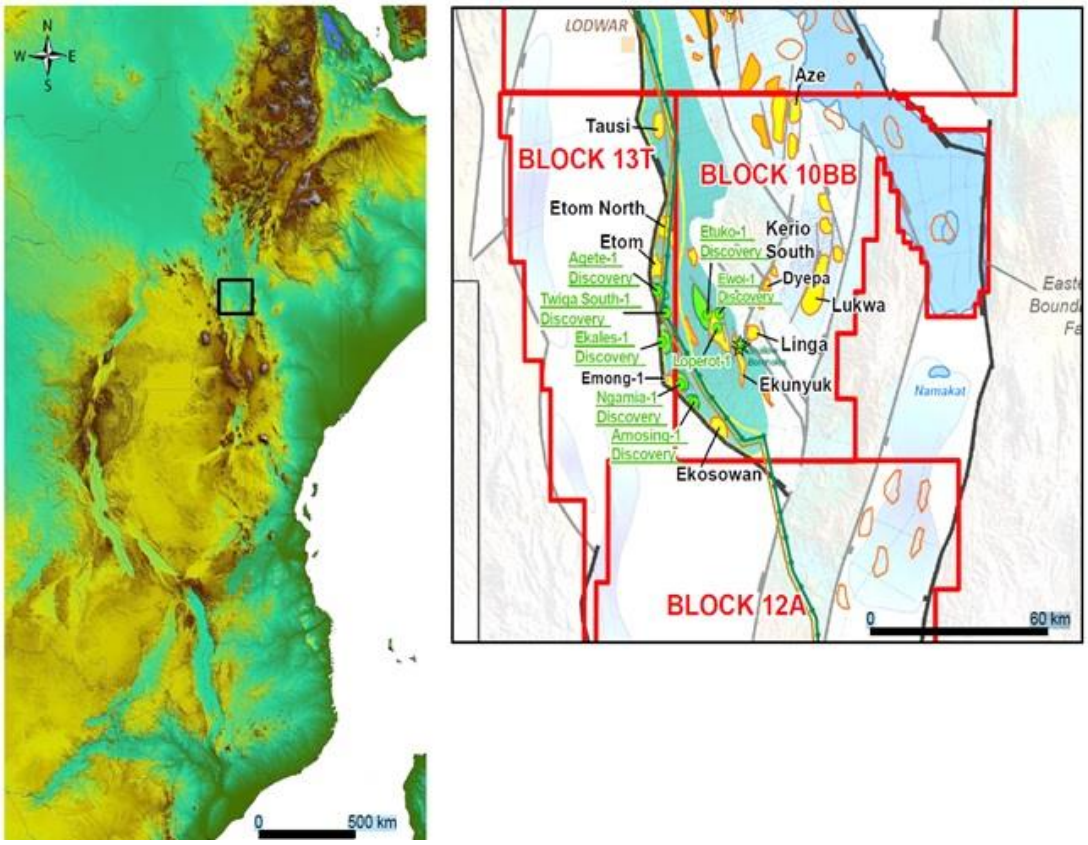

Figure 3.2 Lokichar Basin Oil wells
Source: Tullow Oil

Lokichar Basin is endowed with oil deposits. Oil exploration began in Lokichar Basin way back in the 1980s and 1990s. In 1992, attempts to drill oil were done in Loperot by the Shell Company. However these efforts were shut down with the disagreement between the then government of the day (Moi regime) and the Oil Company. Hence this dream of Oil exploitation came to a halt. In March 2012, Tullow Oil announced discovery of Oil in Ngamia 1 well near Nakukulas (BBC News, March, 2012). Since then Oil exploitation activities have been going on in Lokichar Basin and Tullow Oil has revealed that more than 600 million barrels of Oil is found in Lokichar Basin. The major blocks with Oil in the region are Block 13T and Block 10BB as indicated in Figure 3.2. With this news of Oil discovery in Lokichar Basin, it was the hope of the host community that their livelihood would be improved and hence attain sustainable livelihood.

3.3 Research Design

This study adopted a sequential explanatory mixed methods research design. This is an approach to inquiry that advances the systematic integration, or "mixing," of quantitative and qualitative data within a single investigation (Johnson et al 2007). This mixing is for the broad purposes of breadth and depth of understanding and corroboration of the phenomena under investigation. The basic premise of this methodology is that such integration permits a more complete and synergistic utilization of data than do separate quantitative and qualitative data collection and analysis (Creswell, 2012). By leveraging both, quantitative and qualitative data, a researcher obtains a more holistic view of the concept in question. Hence, the study will be detailed and contextualized, due to the qualitative data, and will also be generalizable and externally valid due to the quantitative data.

The researcher carried out a study of the expectations, opinions and attitudes of the local residents near the oil wells in Turkana County with regard to how oil exploitation improves their living standards. The use of sequential explanatory mixed methods research design for this study is in line with Kothari (2011) who views this as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals and can be used when collecting information about a people's attitudes, opinions, habits or any of the variety of education or social issues.

This study sought to find out whether the exploitation of oil in Lokichar Basin will improve the livelihood of the local community members. Sequential explanatory design fits this study as it enabled the researcher collect original data for the purpose of describing a population, which is too large to observe directly as asserted by Kangethe (2013). Therefore, sequential explanatory mixed methods research design enabled the researcher to gather data from a wide range of respondents. This design is fit for

investigating elements of relationship of one kind or another and fits this study since the researcher sought to establish the symbiotic relationship between Oil exploitation and Sustainable livelihood of the people of Lokichar Basin, Turkana County.

The explanatory-sequential approach is a sequential approach and is used when the researcher is interested in following up the quantitative results with qualitative data. Thus, the qualitative data is used in the subsequent interpretation and clarification of the results from the quantitative data analysis. Mixing methods allows one to put findings in context and add richer detail to your conclusions. Using qualitative data to illustrate quantitative findings can help "put meat on the bones" of the data analysis Using different methods to collect data on the same subject can make your results more credible. This eventually strengthens and enriches a study's conclusions, making them more acceptable.

The use of sequential explanatory mixed methods in this study is for complementarity, which allows the researcher to gain a deeper and complete understanding of the research problem and to clarify a given research result. Hence, the combination of quantitative and qualitative data provides a better understanding of the research problem. Sequential explanatory mixed methods research has the value of expansion, which is projected to "extend the breadth and range of the inquiry". The integration of quantitative and qualitative data provides richer and more detailed findings, and such findings facilitate future research undertakings and allow researchers to continuously employ different and mixed methods in their search of new or modified research questions.

This study adopted pragmatist philosophical paradigm. The three core methodological principles that underlie a pragmatic approach to inquiry include: an emphasis on actionable knowledge; recognition of the interconnectedness between experience, knowing and acting; and inquiry as an experiential process. Based on the core

principles of pragmatist philosophical paradigm, the researcher chose to use it to determine the extent to which expectations of the host community of having a better livelihood from the natural resource wealth (Oil) have been realized in order to conclude that oil discovery in Turkana County led to sustainable livelihood. Pragmatist paradigm fits this study because of the scope of the study having to sample only a section of the population (participants) in Turkana County to base its conclusions.

3.4 Target Population

In this study, the target population comprised of the local residents of Lokichar Basin: Turkana South and Turkana East Sub-Counties respectively. The local residents were targeted in this study because they were the ones directly affected by the activities related to Oil exploitation.

The researcher also targeted other stakeholders (NGOs, Oil Co. Representatives, Religious leaders, politicians, business community and Government officials) working within Lokichar Basin because of their influence on the livelihood of the host community both as policy makers and implementers as well as regulators of policies. At times these other stakeholders especially the NOGs, politicians and Religious leaders act as the mouth piece of the local residents of Lokichar Basin or if you like they become the bridge between the local community and the Oil Companies.

3.5 Sample Size and Sampling Procedures

3.5.1 Sample Size

It is worth noting that it was not possible to reach the entire population of the residents of Lokichar Basin. Therefore, a selected number of respondents were reached to obtain relevant information about the whole population and this is in line with Oso and Onen (2009). The researcher employed the Yamane formula to arrive at the sample size for this study. This method was formulated by Taro Yamane, a well-known statistician in

1967 to help in the determination of sample size from a target population. The Yamane formula is expressed as follows:

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

Where n = Sample size
N= Total population = 226,000
e = the error of sampling = 0.06
1= Constant.
The margin of sampling error (e) in this case was 0.06

Based on this Yamane formula for determining the number of respondents in a research study, a population of 226,000 gives a sample size of 277 respondents. This sample size for this study was composed of respondents from villages within Turkana East and Turkana South Sub-Counties respectively.

The sample size was divided as follows: 250 heads of households (110 respondents from Turkana East Sub-County and 140 respondents from Turkana South Sub-County) and 27 respondents selected from religious leaders, Oil Co. officials, NGOs representatives, local chiefs, government officials (from National and County governments respectively), politicians and business community bringing the total number of respondents to 277 as shown in Table 3.1.

Table 3.1 Sample Size

Respondents	Sample
Households	250
Religious leaders	7
Oil Co. Officials	2
NGOs representatives	3
Local Chiefs	2
National and County Government Officers	2
Politicians	2
Business Community	9
Total	277

Source: Researcher 2017

3.5.2 Sampling Techniques

This study made use of cluster sampling and purposive sampling. In cluster sampling, the target population was divided into a number of relatively small sub-divisions which are themselves clusters of still smaller units and then some of these clusters were randomly selected for inclusion in the overall sample (Kiambati & Itunga, 2014). The clusters in this study were local residents of the two Sub-Counties in Lokichar Basin, namely:- Turkana East Sub-county (Kochodin location) and Turkana South Sub-County (Lokichar location) respectively. Cluster sampling was still evident in Focus Group discussions whereby the respondents were put into groups of sex and age to allow maximum participation of the respondents as well as varied views and opinions. This technique was applied in getting the village residents to participate in the study, whereby the researcher would carry out the investigation in every fifth household in the villages selected for the study.

The researcher also used purposive sampling which allows a researcher to use cases that have the required information with respect to the objectives of his or her research study (Mugenda & Mugenda, 2012). In this case, the researcher selected respondents on the basis of their direct relevance to the study. In this study, the researcher purposively selected Turkana East and Turkana South Sub-Counties because these are the places that have been identified to have large quantities of oil deposits. For purposes of getting more reliable information and insights on the study, the researcher also used purposive sampling for staff of NGOs, religious leaders, local chiefs and government officials (National and County government) who had a direct contact with the host communities in Lokichar Basin. This sampling technique was also applicable to the Oil Co officials and government officials vested with various responsibilities and expertise in their various offices. To gauge the economic growth of the region, the researcher

targeted also the business community through whom it was easier to see how oil exploitation has impacted on economic growth of residents in Lokichar Basin.

3.6 Description of Data Collection Methods

The researcher collected data through both primary and secondary methods. For this study, primary data was collected through questionnaires, informant interviews and focus group discussions. This means that the researcher went to the field in person to get this information (primary data) with the help of research assistants. Such data was collected afresh and for the first time, a feature of primary data, according to Mugenda and Mugenda (2012). Secondary data for this study was collected through literature review of journals, books, reports, internet and official records, including daily newspapers. This is in line with Kiambati & Itunga (2014) who view Secondary data as those already collected by someone else and which have already been passed through the statistical process.

3.6.1 Questionnaire

Questionnaires were distributed to Households, Government Officers (National and County), politicians, members of NGOs, business community and Religious leaders within the study area. Questionnaires for this study had the following sections: Demographic information; Source of Livelihood of the local people in Lokichar Basin before Oil exploitation; local community participation in Oil exploitation in Lokichar Basin; Contribution of Oil exploitation on people's livelihood in Lokichar Basin; Obstacles faced in Oil exploitation in Lokichar Basin. Questionnaires used in this study took the form of structured or close-ended questions and unstructured or open-ended questions in line with Kothari (2011). Even then the researcher also made use of matrix questions, which are characterized by the use of the Likert scale. The use of questionnaires can lead to a wide coverage and thus the researcher gets adequate

information. However, there is little or no personal contact between the researcher and the respondents. This then was solved through the visits to the respondents especially on distributing and collecting the questionnaires, which allowed both the researcher and the respondent to interact.

3.6.2 Interview Schedules

The researcher used both personal interviews and telephone interviews. Interviews allowed the researcher to clarify ambiguous answers and when need be seek follow-up information. This necessitated the use of telephone interviews (Kambati & Itunga, 2014). Personal Interviews were done with the household heads as a help to capture information that was not be obtained through direct observation. Through personal interviews, the researcher gradually built a rapport with the respondents and this helped in getting more detailed and authentic information on the phenomena under investigation. Interviews can be costly since the researcher will need to physically meet the respondents. It can also be biased. However, interview schedules are flexible and enable the researcher to get the non-verbal communication from the respondents.

Telephone interviews were employed when dealing with Government Officers as well as workers of the extractive industries for clarity of information collected to update the research work. The interview guides were divided into the following sections: Demographic information; Source of Livelihood of the local people in Lokichar Basin before Oil exploitation; local community participation in Oil exploitation in Lokichar Basin; Contribution of Oil exploitation on people's livelihood in Lokichar Basin; Obstacles faced in Oil exploitation in Lokichar Basin.

3.6.3 Focus Group Discussions

Focus Group Discussions (FGDs) were employed to collect data from a group of people who share similar experiences and background. The respondents were divided into

smaller groups to allow greater participation in the research. In this research the respondents were grouped according to sex and age so that women and the young people can also have a chance of airing their views. FGDs can be expensive especially because it involves travelling to meet the respondents and at times respondents require some sort of motivation in monetary forms. Five FGDs were conducted with each of them having 10 respondents. The reports of the FGDs were done through note taking with the help of the research assistants. FGDs allowed the researcher to ask follow up questions and probe for special interest groups, and elicit information from participants that will help to get the depth of understanding, interpretation, attitudes and beliefs of the participants or respondents.

3.6.4 Document Analysis

This study considered analysing documents of Extractive industries (EIs). The researcher analysed documents of Tullow Oil Co, for purposes of gathering relevant information to the study. This helped in getting information on social investments by the EIs and also clarified some gap of information from the local community. To perform document analysis effectively, the researcher checked the source of documents for possible bias. However, for this study, this was not quite easy given the high levels of secrecy in the EIs.

3.7 Validity and Reliability of Instruments

3.7.1 Validity Test

Validity deals with whether an instrument measures exactly what is meant to measure (Mugenda, 2008). The questionnaire items in this study were tailored to the testing of the outcomes of the interaction of agents involved in a natural resource management when an institution is introduced to regulate the behaviour of the agents. Specific attention was given to the internal ecological validity. For the internal validity the

instruments sought to ascertain whether a relationship between the ban on the use of the land near the oil wells for grazing animals of the Turkana pastoralists and a dwindling income could be established. According to Bryman (2004), ecological validity is concerned with the question of whether social scientific findings are applicable to people's every day, natural social settings.

3.7.2 Reliability Test

Reliability is concerned with the question of whether the results of a study are replicable or not (Bryman, 2004). The questionnaire items in this study were constructed taking some parameters into consideration to make the results consistent. The instruments were first tested to find out their suitability so as to make adjustments if any in order to fulfil the reliability requirement.

A pilot study was carried out in Kerio ward in Turkana Central Sub-County. This was meant to the test validity and reliability. The researcher chose Kerio Ward for the pilot study because it belongs to Kerio Basin where oil deposits exist and has also had oil-related activities carried out by Tullow Oil Company. Comments from the respondents formed part of the adjustments made in the data collection instruments. Using Pearson Product moment formula, the data collection instruments yielded reliability Cronbach coefficients of 0.76 upon subjected to the pilot study. This then qualified the data collection instruments efficient and reliable for collecting data.

3.8 Description of Data Analysis Procedures

The data collected from the field (primary data) was analysed with the aid of Scientific Package for Social Scientists (SPSS) version 23 and presented using descriptive statistics and inferential statistics. The researcher reported the findings using frequency and percentage using tables, bar graphs and pie-charts. The qualitative data was analysed using qualitative analysis and was described and discussed in detail to offer

support to the quantitative data. This was put into thematic areas on the basis of the objectives of the study.

3.9 Ethical Considerations

The researcher sought consent from the relevant authorities for the entire respondents that were engaged in the study including obtaining the research permit from the National Council for Science Technology and Innovation (NACOSTI): The researcher sought approval from the local residents (Turkana pastoralists), The County government of Turkana and the oil company (Tullow oil) representatives before the interviews were conducted since they deal with an important issue that all Kenyans are interested in. This was done by giving interview schedules to the respondents ahead of schedule interviews. To clear any misconception about the intentions of the study, an explicit overview of what the research entailed and how the results will be utilized was given to the respondents.

The researcher promised to offer privacy and confidentiality to the informants to gain confidence from them and adhere to the principle of anonymity. Data gathered through interviews required that the researcher be protected against interviewer misperceptions and avoid informants who lack credibility.

To ensure that data collected was consistent with the researcher's conclusions, constant checking with informants during and after interviews was done through telephone calls. Any information elicited from a questionable source was not considered authentic. By and large, I tried to keep all minor transgressions in check to make the research findings were authentic.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Overview

This chapter presents analysis and discussion of the major findings of the study based on the objectives of the study. The major thematic areas discussed in this chapter include: Demographic information, Livelihood of the local community before oil exploitation, Local community participation in oil exploitation, contribution of oil exploitation to the people's livelihood and obstacles faced in oil exploitation in Lokichar Basin. The analysis was done using Scientific Package for Social Scientists (SPSS) for quantitative data using both inferential and descriptive statistics to determine frequencies and percentages and then presented using charts and tables. The qualitative data was analyzed using qualitative analysis in the form of narratives put into thematic areas in line with the objectives of the study.

4.2 Response Rate

This Chapter deals with the presentation and analysis and discussion of findings. The sample size for the study was 277 respondents. However, the data collected and analysed was from 240 respondents which gave a response rate of 86.6%. A response rate of 30% and above is acceptable for obtaining useful, reliable and valid information in a manner that makes it possible to analyze and draw conclusions (Oso and Onen, 2009). Therefore, this high response rate of 86.6% greatly contributed towards making valid and sound conclusions.

4.3 Demographic Information

Table 4.1 shows that majority of the respondents (55.4%) were male whereas 44.6% were female. The researcher was interested with the heads of households and this showed the African tradition of male being heads of households and this too is typical

of pastoral communities whereby authority is vested on male. The study also shows that men were readily available to participate in the study and at the same time men were concerned of the outcome of Oil exploration in their region given that they are family caretakers. Most of the office bearers who eventually participated in this study were male. The fact that even the office bearers in Lokichar Basin are dominantly male reveals the cultural orientation of this society, which gives priority of education to the male as they trust that females are supposed to be a source of dowry. Hence, women are viewed as "a product" for marriage and thus no need to be taken to school for formal education.

4.3.1 Gender of Respondents

Table 4.1 Gender of Respondents

Gender of Respondents	Frequency	Percent
Male	133	55.4
Female	107	44.6
Total	240	100.0

Source: Field 2018

These findings confirm the assertion of Ross (2012) that oil-producing economies in general have a poor record in incorporating women in their activities. This means that there was need to build the capacity of women and empower them so as to form the decision-making team in the local community. It is also important that women are given chance to take up leadership positions in order to have their voice in the undertakings of the society that touch upon all members of the society.

4.3.2 Education levels of Respondents

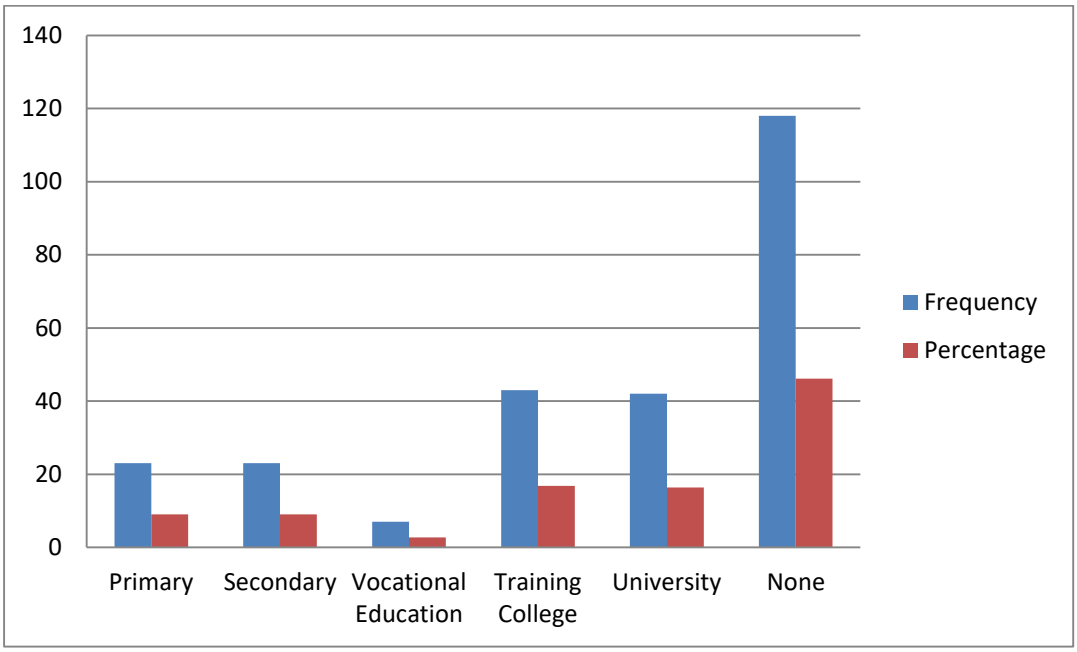

Figure 4.1: Education levels of Respondents
Source: Field 2018

From Figure 4.1, there is an equal percentage of 9% of the respondents having primary education and secondary education respectively, 2% of respondents have attained vocational education, An equal percentage of 18% each has attained training college education and university education respectively. The percentage of respondents with primary and secondary level of education can be attributed to the introduction of free primary education in 2003 and subsequent subsidization of secondary education from the year 2008 by the Government of Kenya.

Majority of respondents (44%) had never attained any formal education at any level. This majority forms the larger group that lives closer to the sites and residential camps used by extractive industries. This meant therefore that the local residents, especially those living near the oil exploitation and drilling sites, got lowly jobs due to their general low education levels.

The Focus Group Discussion (FGD) showed that that majority of the youth (75%) do not proceed to college due to several reasons such as poverty and low income,

unemployment, low grades, early pregnancies and peer pressure which contributes to education apathy.

These findings necessitate the urgency to empower the local residents of Turkana with the education, knowledge and skills necessary for better standard of living. As pointed out by Borjas (2013) education and training is a sure way of enhancing human capital. Investment on human capital, a vital livelihood resource, can trigger socio-economic changes that consequently lead to economic growth. This is because highly skilled human resource is more productive. Therefore, the local residents of Lokichar Basin need to be assisted to acquire the necessary knowledge and skills for sustainable livelihood.

An educated population is more likely to participate in development projects since they are more enlightened and more aware of their role compared with an uneducated population. Additionally, they can also be able to make an informed decision in terms of natural resource base sustainability.

4.3.3 Age of Respondents

Table 4.2 indicates that a majority of the respondents were between 31 years of age and above. This shows that the respondents were old enough to have had experience on the impacts of the oil exploration in Lokichar Basin. Thus the information that the sample selected was valid enough in terms of age spread and representation to carry out the study.

Table 4.2: Age of Respondents

Age of Respondents	Frequency	Percent
20-30 years	30	12.5
31-41years	120	50.0
42+years	90	37.5
Total	240	100.0

Source: Field 2018

4.4 Livelihood of the Local People before Oil Exploitation

The findings of this study showed that 65% of the respondents reveal that the main source of livelihood of the Turkana people is livestock keeping, 28.3% run small business enterprises whereas a small percentage (6.7%) are farmers as indicated in Table 4.3. Farming is practiced in small-scale along River Turkwell and River Kerio. The Turkana people have lived basically on livestock keeping and it is from the livestock they keep that they have been able to: Educate their children, pay for medical services, pay dowry and buy food for their households.

Table 4.3: Sources of Livelihood

Source of Livelihood	Frequency	Percent
Livestock Keeping	156	65.0
Farming	16	6.7
Business	68	28.3
Total	240	100.0

Source: Field 2018

Young boys in the Turkana Community are given the task of grazing animals to train as future custodians of the family, taking the role of a household head. This is indicated in Plate 1 here below, which shows a young herdsman grazing the animals near the oil camps.

Plate 1: Picture of a Young Herdsmen Grazing Animals outside Oil Camp
Source: Field (2018)

Business enterprises have in the recent past been embraced by the Turkana pastoralist community with a few people doing SMEs funded by themselves while others in towns like Lokichar have obtained funds from Church organizations such as Diocese of Lodwar, NGOs present in the region and also Tullow Oil Co. as revealed from the documents of social investments in the Tullow Offices.

It is worth noting that some of the local community living near River Turkwell and River Kerio. Even then Tullow Oil Co. has also supported small scale agriculture in Nakukulas (Ustawi, May 2018). This demo farm in Nakukulas is meant to establish suitable crops that can grow in the region.

4.4.1 Pastoralism and Oil exploration

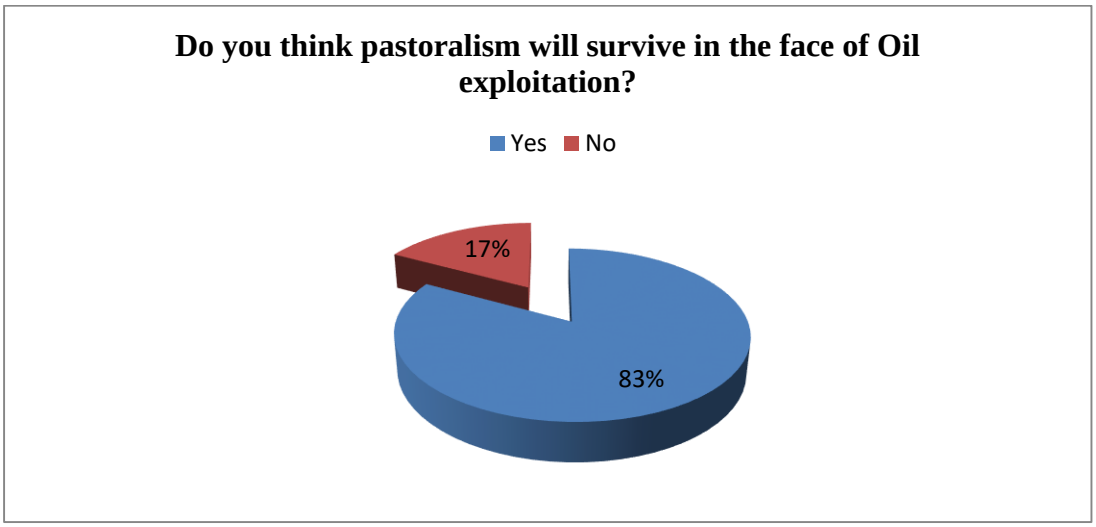

Figure 4.2: Do you think pastoralism will survive in the face of Oil exploitation?
Source: Field 2018

The findings of the study in Figure 4.2 showed that majority of the respondents (83%) acknowledge that the practice of pastoralism will not be lost whereas a small group (17%) see pastoralism being under threat of oil exploitation and therefore feel that the local residents will not continue with their pastoral way of life in the face of oil exploration. The findings of Suarez (2013) on oil economy in Ecuador confirm that oil economy can lead to loss of primary source of livelihood as the people of Ecuador abandoned hunting for Oil economy. This is the fear of the future of pastoralism in Lokichar Basin at the dawn of Oil industry.

Oil exploitation has the tendency of bringing about the "economic curse" which means that the people are likely to abandon their original economic activity and depend on oil exploitation (Ross, 2014). The local residents feared that pastoralism will be lost as a result of oil exploitation due to the following reasons: Increased insecurity, climate change that contributed to long droughts and thus loss of animals, loss of land for the residential camps and activities of extractive industries, casual labour to herders, displacement of the local residents and venture into business.

Turkana East and Turkana South Sub-Counties have experienced insecurity for a long time due to cattle rustling that goes on between the Turkana and their neighbours, Pokot. Insecurity even worsens with the coming of oil exploitation because most of the young men (herders) get jobs in the extractive industries as casuals and therefore abandon their role of taking care of the animals. Worse off is the fact that most of National Police Reservists (NPRs) in Lokichar Basin were security officers in the extractive industries (Mukutu, 2016). This left the community vulnerable to attack from the Pokots and thus animals taken by the cattle rustlers.

A big threat to pastoralism is the loss of land which majority of the respondents (70.4%) acknowledged part of the grazing land has been taken by the extractive industries as indicated in Table 4.4. On the other hand, 29.6% of the respondents responded that they have not lost land. Land is an important natural asset for the pastoral communities and so losing it is perilous to their livestock. Land in Turkana traditional community is communal and so those living in the traditional pastoral life communally claim to have lost communally owned land. Those living in urban towns in Turkana are the minority in this study who assert not to have lost land given the fact that land in urban Turkana is private owned.

Table 4.4: Loss of land to the extractive industries

Have you lost land to extractive industries?		
	Frequency	Percent
Yes	169	70.4
No	71	29.6
Total	240	100.0

Source: Field 2018

Grazing land has been away taken by the extractive industries and now use for their residential camps and drilling sites. Hence the local residents cannot access this land

for their use. Reduction of grazing fields which results from loss of land creates vulnerability to pastoral economy. One respondent said:

> *"….Our "bank" to mean prime grazing land has been taken away by the Tullow Oil Co…Our animals will not get pasture…This will lead to starving our animals and so death to the animals…This will rob us our primary way of life…."*

However, it is important to note that majority of the local residents are confident that despite all these threats to pastoralism, they will not abandon their pastoral way of life since this is their cultural heritage. One respondent said:

> *"….Livestock keeping is our culture and we cannot leave it…Oil exploration is a new thing whose results we do not know… We have no experience of Oil exploration having done any good to us…We have for long lived on livestock keeping and abandoning it will be betraying our ancestors…"*

Pastoralism has been the engine of economic life in Turkana County and so the residents feel at home with this age-old economic activity. It is like saying "…Turkana people and pastoralism were born twins…" Meaning all things will change in Lokichar Basin but pastoralism will never die.

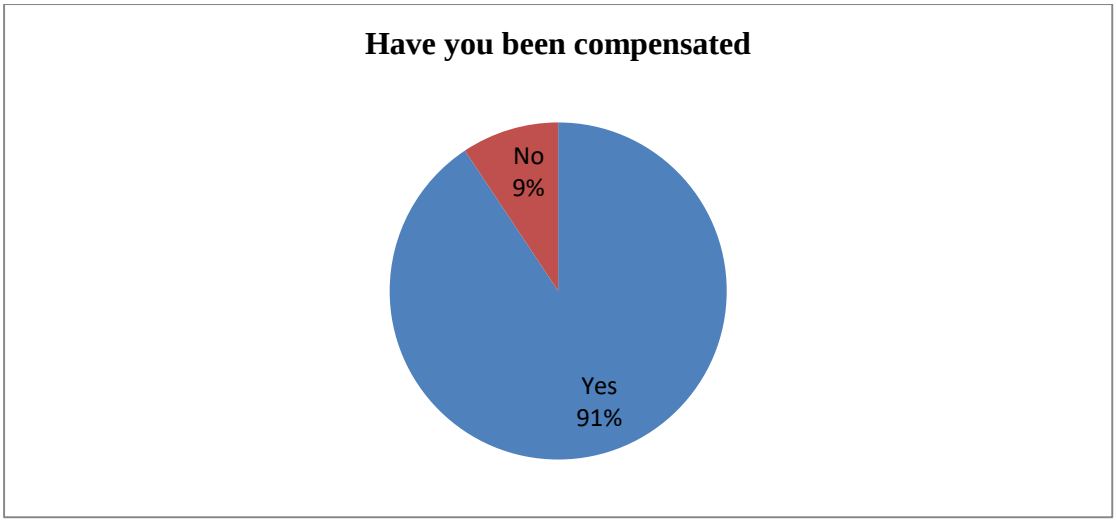

Figure 4.3: Have you been compensated?
Source: Field 2018

According to the respondents, the land was given to Tullow Oil Co. in form of lease with expectation of compensation from Tullow Oil Co. In return the local community

expected to accrue some benefits in exchange of the land offered to the EIs. A Focus Group Discussion conducted in Lomakamar village, Lokichar location in Turkana South Sub-County showed that the host community had high expectations arising from the activities of the Extractive Industries in the region. The local residents expressed a number of expectations such as: Compensation for the land taken by the extractive industries; job opportunities; availability and easy access to water, money, tenders and security among others.

Majority of the respondents (91%) assert that they had not been compensated whereas 9% acknowledge being compensated by Tullow Oil Co. as shown in Figure 4.3. From the findings of this study, the following wells got compensation: Ekales 3, Amosing 5, Etom 2, Etom 3, Emekui, Etiir, Erut, Amosing 6, Amosing 7, Ngamia 8, Ngamia 9 and Ngamia 10 each at Ksh 7m. On agreement among the members of the local community, the money for compensation was put in the account managed by the local community with one signatory from Tullow Oil Co., to ensure that that the whole community benefits from the compensation fee through community-led projects. This was after realising that the first bunch of compensation fee given to Lochwa Community was misappropriated.

The local community have had issues with the extractive industries especially Tullow Oil Co. on grounds that they had not been compensated yet they bear the consequences of their activities and above they have lost access to this lands for pasture, an important resource for pastoralists. On finding out how the land was given to the Tullow Oil Co., the local residents put that responsibility on their local leaders. The local community revealed that land was given to Tullow Oil by the government (National government in conjunction with the county government. One respondent said:

> *"…We were called to a baraza attended by our county government leaders and we were told that the extractive industries will take the land where there is oil deposits…That the land will be given on lease as the extractive industries explore oil which will later benefit our community…"(Interview with Lokol, 2019).*

Consequently, the local community had to give in to the opinion of the leaders who after all are their representatives though half-heartedly. These findings are in agreement with the study of Stetson (2012) done in Peru, where the government took advantage of the vulnerability of the rural folks in dictating how things need to be done and even making decisions for them. The local residents of the Lokichar Basin being rural folks only receive decisions made by the government that takes advantage of their illiteracy levels that renders them vulnerable.

The voice of the household respondent on how Tullow Oil Co. acquired land for oil extraction was echoed by Tullow Oil officers who acknowledged that Tullow Oil Co. was given land by the GOK in collaboration with the County Government of Turkana then known as Turkana County Council. An officer from the Ministry of Lands in Turkana County Government confirmed that land was given to Tullow Oil Co. as an investor by the national government in collaboration with the defunct local council. Sources from the Tullow Oil offices reveal that the Tullow Oil Co. did not pay for the land but rather TCG receives rent for the use of land to date.

Research findings in this study showed that pastoralism is under threat of extinction with the dawn of extractive activities in Lokichar Basin. Much as the local respondents felt that pastorlaism will never come to extinction, it is good to note that there is need for the local community to put in place certain mechanisms for coping with the stress and shock subject to their primary source of livelihood.

In the advent of Oil exploration in Lokichar Basin, the local residents sought other livelihood strategies as adaptation to the changes brought about by oil exploitation. This explains the aspect of dynamism in every society.

Table 4.5: Livelihood adaptation strategies with oil exploitation

Livelihood of the local residents in the advent of oil exploitation in Lokichar Basin		
	Frequency	Percent
Education	124	51.7
Seek Casual Labour	61	25.4
Agro-pastoralism	55	22.9
Total	240	100.0

Source: Field 2018

The findings of the study in Table 4.5 showed that 51.7% of the respondents opted for education as a coping mechanism, 25.4% opted for casual labour whereas 22.9% opted for agro-pastoralism as their coping mechanism. The local community sees education as a key to better livelihood. As put by the respondents:

> *"…Ngitunga a ekalamu monan eyarite a na kimite kana…Kechi monan igirio lo kazi.." (Those who are educated are the people who will in future reap the benefits of Oil exploration because they will be given jobs in the Oil camps).*

This has motivated many families to take their children to school unlike the olden days when parents were forced to take children to school. Thanks to the emergence of Oil exploration as it has brought a shift of mentality to the Turkana people who for a long time only valued livestock keeping. Education enhances human capital, an important resource for sustainable livelihood. Education is an important medium of acquiring essential knowledge and skills (Neena, 2014). Our world is constantly changing and developing so it is very important to invest on education of people to enable them to understand the problems of modern society and solve them in a proper way. Education is definitely important in one`s life. A gift of knowledge can bring us to the top of our

dreams. It leads us to the right path and gives us a chance to have a wonderful life. Education makes people capable of doing new interesting things that can go a long way to improving human living conditions and standards.

In addition, 25.4% of the respondents saw casual labour as another strategy to cope with the extinction of pastoralism. The oil and gas industries are highly capitalized; much of the manual work has been replaced by automation, but significant parts of oil and gas operations still rely on human input. Therefore, oil and gas industry has the potential of offering casual labour to the people living near oil sites (Ian, 2010). This labour includes short-term work with a direct contract or part-time work with a direct contract. Such employment of both contract and permanent staff will, of course, to some extent depend on the level of activity within the industry. Even then it is good to note that employment in the oil and gas industry is limited and skill specific to a larger extent.

Other respondents (22.9%) opted for agro-pastoralism as a coping strategy for their livelihood. Land in Lokichar Basin is potentially fertile and can support small-scale agriculture. Tullow Oil has already supported the establishment of demonstration farm in Nakukulas which produces vegetables to be sold (Ustawi, 2018). The aim of this effort is to help the local residents to see how potential their land is for agriculture and so enable them in future to depend on agriculture as an alternative to livestock keeping. With this alternative source of income more and more people will see the value of agriculture practices in the region and hence turn away from the practice of charcoal burning in order to give forests chance to regenerate.

4.5 Local Community Participation in Oil Exploitation

It is worth noting that the local community ought to be incorporated in the decisions around oil exploration in Lokichar Basin for purposes of smooth running of the

activities as well as building a better relationship between the extractive industries and the local residents living near their area of operations.

54.6% of the respondents were not aware of what goes on in the EI whereas 45.4% know the activities of EIs as indicated in Table 4.6. Local community claims that they are sidelined by Tullow Oil Co. and even not allowed anywhere near the residential camps or operation sites of Tullow if not employees of the EI. This then means that there was no way they could be aware of the operations of the EIs. Hence, they ended up being passive recipients of the decisions made even if they affect them directly.

It is worth noting that even the fact of Oil being in Lokichar Basin is one thing that the local residents had no knowledge. When asked how the local residents got to know that there is Oil in their region, one respondent said: One elder in Kalapata village in Turkana South District said:

> *"…Mzungu was in Loperot in the 90s and mentioned that there is oil in Turkana…the "mzungu" left and said they will come back for the oil deposits they have seen in Turkana…(Interview with Karenyang).*

Another herdsman from Nakukulas said:

> *"…We heard from our leaders that radios have announced in Nairobi that there is oil in Turkana…(Interview with Loluka).*

Table 4.6: Awareness of the activities of the Extractive Industries

Are you aware of the activities of extractive industries?		
	Frequency	Percent
Yes	109	45.4
No	131	54.6
Total	240	100.0

Source: Field 2018

When the local community is not aware of what is going on, the consequence is mistrust. A study of oil exploration in the Alberine region of Western Uganda by Mwesigye (2016) revealed that when the local people feel inadequately aware of

information on natural resource management, they build mistrust on the EIs. As such even the local residents started feeling like even their resource was being taken secretly. A resident in Nakukulas said "…I think even the Oil is being carried at night secretly by these trucks of the Oil Co….who knows….." This leads to the community disowning the resource as not bearing any benefits to them in future. In fact one elder from Loperot said "*….Nangolenyang a Kenya, ka Tullow ka eesi lu a ekalamu monan kiteyari Akimite na…*' (Finally, the beneficiaries of this Oil you are talking about will be the GOK, Tullow Oil Co. and you the elites). In this case the locals felt that they may not even benefit from the Oil proceeds given that they had no idea of the activities of the EIs.

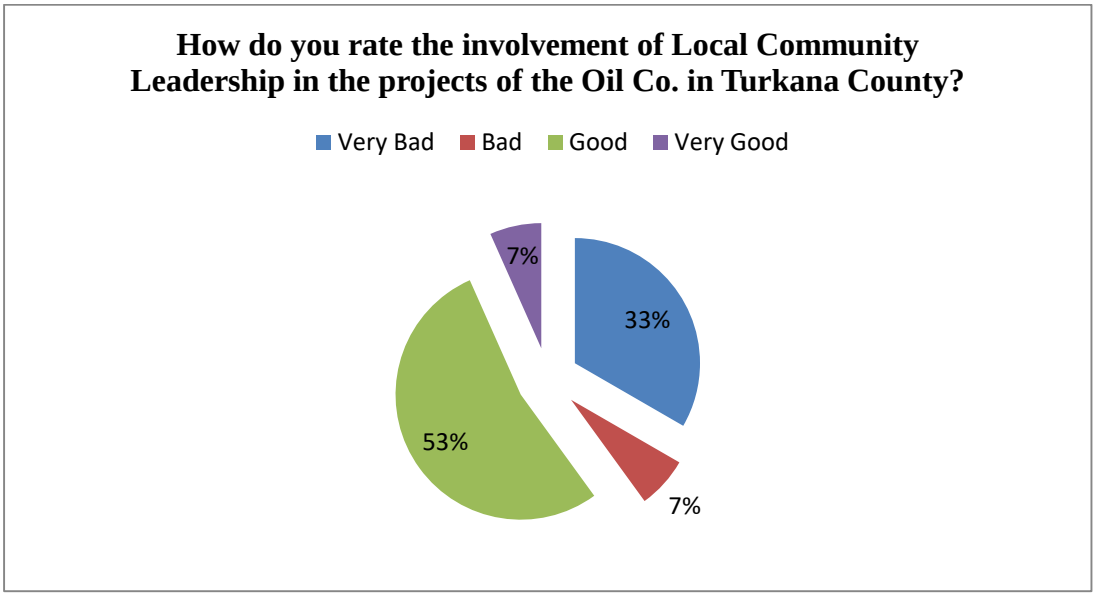

Figure 4.4: How do you rate the involvement of the Local Community Leadership in the projects of the Oil Co. in Turkana County?
Source: Field 2018

However, the local leadership asserted their involvement in the operations of the EIs and this then they do on behalf of the local community. Here the local Community leadership refers to the Chiefs and religious leaders as informants in the study. Leaders, being representatives of the local community, need to be in touch with the EIs in order to bridge the gap of information between the EIs and the local residents. The findings of this study as seen in Figure 4.4 showed that majority of the local community

leadership (53%) asserted that their involvement in the projects of the EIs is very good, 7% rate their involvement as being good. A minority of the local community leadership was not contented with their involvement in the projects of EIs and thus 33% rate this involvement as being very bad whereas 7% rate it as being bad.

On the overall the local community leadership is fully involved on matters touching the livelihood of their folks. One Local Chief said *"We are the eyes of the government on the ground…we are on the forefront on matters affecting our people and so we are fully involved in the projects of EIs for the good of the people we represent…".* Dialogue between stakeholders increases the opportunities for success and hence development. A study on the reserves in the Eastern Italian Alps in the province of Trento by Umberto (2017) confirms the success brought by stakeholder involvement in the management of natural resources.

Despite the involvement of the local community leadership in the projects of the EIs for the community, there was still dissatisfaction on the part of the local residents who claimed that their views were not put into consideration. This kind of attitude led to a strained rapport between the EIs and the local residents.

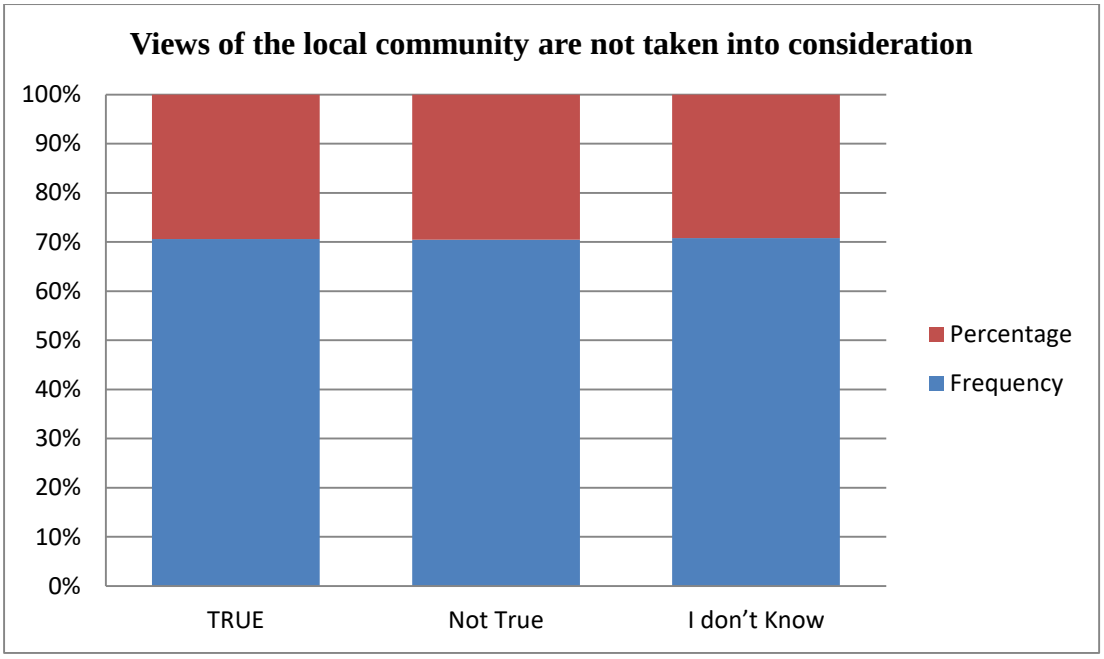

Figure 4.5: Views of the local community are not taken into consideration
Source: Field 2018

It is worth noting that the local community here refers to the communities living adjacent to the exploration sites. These communities had expressed their dissatisfaction of being represented by the local community leadership in the name of Chiefs and politicians. The findings of the study in Figure 4.5 showed that 82.9% of the respondents agree to the fact that the views of the local community are not being taken into consideration by the EIs. On the other hand 12.1% of the respondents consider this factor as not being true whereas 5% do not know whether it is true or not that their views were not considered by EIs. The local community felt disrespected when their views were not considered. Such was the case with the latest demonstrations after the launch of the EOPS.

When the local residents are poorly engaged, marginalised or excluded from the dialogue in the development process, they are almost certain to begin to oppose the development. This is particularly the case where they have not been consulted on whether the development should proceed at all, especially if there is the risk that they will bear the impacts and fail to benefit.

Table 4.7: Consultation with extractive Industry for oil camps establishment

Were you consulted in the establishment of camps for extractive industry in your area?		
	Frequency	Percent
Yes	131	54.6
No	109	45.4
Total	240	100.0

Source: Field 2018

The findings of the study showed that the 54.6% of the local community members assert that they were consulted in the establishment camps for EIs. On the other hand, 45.4% do not agree to have been consulted as indicated in Table 4.7. According to the local communities living near the oil drilling sites, they were only informed that the EIs have been given a particular part of the land for their camps and operation sites. One herdsman from Lokicheda village said:

> *"…These outsiders (Tullow Oil) came with our leaders and informed us that Tullow Oil want to establish an Oil camp (The famous Ngamia 1) in our gazing land…*

This is a clear indication that the communities living near Oil camps were only informed of the decision without being involved in the primary stage of deciding where camps will be built. In whole we can say that the community participated though in the category of passive participants. Another hedsman added his voice to this issue with the words: *"….After a lengthy discussion we accepted that they can establish the camp where they have chosen… After agreeing with them we slaughtered some goats and camel as brought by Tullow Oil as a ground breaking ceremony… (Interview with Lokeno).*

Plate 2: Picture of Ceremony after Land Has Been Given to the EIS

Source: Field 2018

The local community celebrated with the investor (Tullow Oil Co. officials) every after the land was given to the EIs to carry out their activities as indicated in the picture in Plate 2. This is a manipulative form of participation, which comes with incentives to motivate participants to take part in a decision. The incentive to the local community in this case was the bringing of animals to celebrate the agreement reached upon of giving community land for oil-related activities.

Table 4.8*:* Local community capacity to contribute to oil related activities

Do you have the capacity to contribute to Oil Exploitation activities in Lokichar Basin?		
	Frequency	Percent
Yes	90	37.5
No	150	62.5
Total	240	100.0

Source: Field 2018

Against this background, respondents therefore pointed out the following areas as vital for building their capacity: Sensitization on Oil-related activities, Awareness on benefit-sharing, protection of the environment, advocacy and technical skills on Oil industry. It is important that the local community participates more in the entire decision-making process

Due to low levels of competence of the communities living near the drilling sites, it was then necessary to seek their opinion as to who they can trust for advocacy in order that they too can benefit from the natural resource in their region.

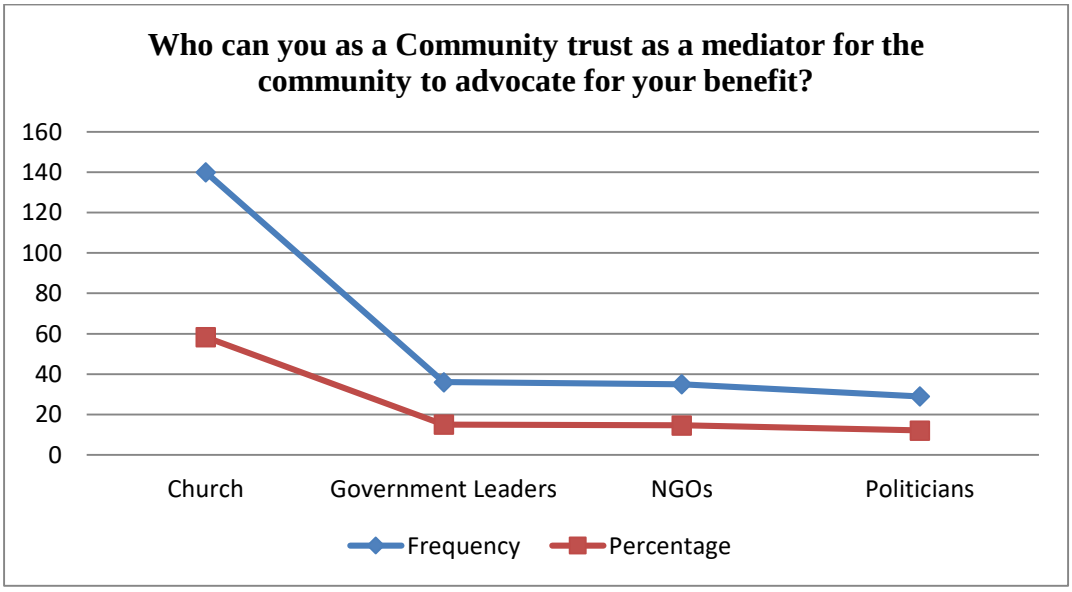

Figure 4.6: Who can you as a Community trust as a mediator to advocate for your benefit?
Source: Field 2018

60% of the respondents trust the Church Leadership as advocates for their benefit, 20% of the respondents trust the Government Leaders whereas 10% of the respondents place their trust on NGOs and politicians respectively as indicated in Figure 4.6. One respondent from Kapese said:

> *"…Nyikidemari ituan a Ekanisa ibore…Keci bon itijiunete ateni.. (Church are not corrupt…Them alone can mean good to us… (Interview with Lapur,).*

These findings are in agreement with a study done by Erik in Ghana (2018) on oil production and fishing communities, which confirm that there is always a feeling of mistrust on the community against politicians' capability of steering affairs of the community. People also think that the government cannot ensure equal distribution of resource revenue.

4.6 Contribution of Oil Exploitation on People's Livelihood

The study sought to find out the symbiotic relationship between Oil exploration and the livelihood of the people in Lokichar Basin. This was then done using Pearson Coefficient correlation using a two-tailed test as shown on table 4.9.

Table 4.9: Correlation between impacts of oil exploitation in Turkana County on livelihoods and better living conditions

		Do you think the exploitation of oil will better your living conditions?	Impact of exploitation of oil on livelihoods.
Do you think the exploitation of oil will better your living conditions?	Pearson Correlation	1	.184
	Sig. (2-tailed)		.055
	N	110	110
Impact of exploitation of oil on livelihoods.	Pearson Correlation	.184	1
	Sig. (2-tailed)	.055	
	N	110	110

Source: Field 2018

At the level of significance of 0.055 and alpha level of 0.05, the (Pearson Coefficient correlation) p-value is 0.184, the study concluded that there was a positive significant relationship between oil exploitation and livelihood of people. This signified that the exploitation of oil in Lokichar Basin had impacted positively on the livelihoods of the local residents of the region. Hence, the study concluded that oil exploration has the potency of bringing about a positive transformation on the livelihoods of the local residents of Lokichar Basin. However, these findings show that there is a weak positive relationship between the exploration of oil in Lokichar Basin and its impact on the livelihoods of the local residents. This was due to the fact that a number of Turkana residents were still skeptical about the oil find bearing positive results while some of the local residents had some light hope of the impact of the exploration of oil in Lokichar Basin. By and large, this was influenced by the high expectations that the local residents had on the discovery of Oil in the region.

The optimism of better living standards as a result of oil exploitation was well put in the voice of the local community leadership as shown in Figure 4.7. Majority of the respondents (60%) believed that oil exploration in Lokichar Basin will lead to sustainable livelihood. However, 40% of the respondents were pessimistic and did not see oil exploration yielding to sustainable livelihood.

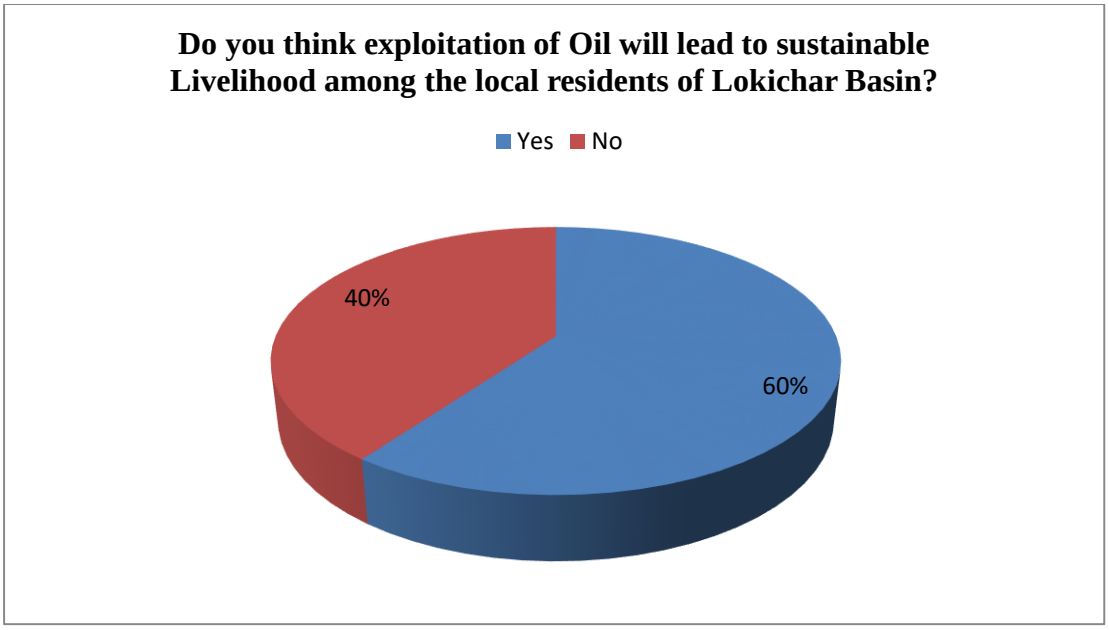

Figure 4.7: Do you think Oil exploitation will lead to sustainable development among residents of Lokichar Basin?
Source: Field 2018

The optimism of the respondents was echoed in the benefits the local residents expect from the presence of EIs in the region. In a focus group discussion with stakeholders in Lokichar Basin, the local community had high expectations of benefits from the EIs. Among the expected benefits were: Provision of better social amenities, improved infrastructure, scholarship for students to access education in institutions of learning, increase income, better security, provision of safe and clean water, and employment.

Following the expectations of the local community, this study therefore discussed the contribution of oil exploitation to the livelihood of people on the basis of specific dimensions of the Sustainable Livelihood Framework: Financial capital (Employment creation and income), Physical capital (Infrastructure and provision of social services), Human capital (Education), Natural capital (Land) and Social capital (Networks).

4.6.1 Oil exploitation and financial capital

Employment creation

An examination of how oil exploitation had affected employment creation in Lokichar was seen in Table 4.10 which showed that 11.7% of respondents rated effect as being high, 29.6% rated it as being moderate, 39.2% said it was low, 12.9% had not seen any contribution of oil exploitation to employment creation, and 6.7% had no idea whether employment has been created or not by EIs. These findings were to a large extent attributed to the low education levels of the communities living near the exploration sites.

Table 4.10: Oil exploitation and employment creation in Lokichar Basin

Oil exploitation and Employment creation		
	Frequency	Percent
Highly	28	11.7
Moderately	71	29.6
Low	94	39.2
Not affected	31	12.9
I dont know	16	6.7
Total	240	100.0

Source: Field 2018

Local communities living near exploration sites had had high expectations of jobs to be created by the EIs. However, this has been not realized to a large extent and as expected because of lack of expertise on oil-related jobs from the locals. A study in the Western Kordofan state in Sudan confirms these findings as the local residents complained of lack of employment creation (jobs). Similar to the case of the people of Lokichar Basin, the case of Sudan was that of outsiders being employed instead of the local residents. One respondent from Lochwa said:

> *"…Tullow oil only gives us two weeks jobs with low wages…our children are employed for two or three weeks then they are fired and*

> *told no more jobs yet the outsiders are there throughout…can you call this employment?(IInterview with Lochakula).*

At the initial stages, a number of local residents had a large number hired as Road Marshalls, security officers and village socialization officers (VSOs). However, these positions of road Marshalls and VSOs were scrapped. This explains the moderate employment creation rate. A document analysis of Tullow records reveal that Tullow Oil has created approximately over 5,000 direct and indirect jobs in the years between 2013 and 2018 since of its presence in Lokichar Basin (Ustawi, May 2018). The number of jobs created is small compared to the population in search of employment and thus the assertion of low job creation in Lokichar Basin. A job position enjoyed by the local residents to date was that of being Community Liason officers (CLOs). Even then CLOs were taken by people outside the exploration sites because of their illiteracy levels and as such "outsiders" were the ones employed. Limited job opportunities meant that the locals cannot really benefit directly from the oil exploitation in terms of financial status. Other job opportunities available for the local residents were: Drivers, security, cooks and cleaners.

4.6.2 Oil exploitation and income

According to Figure 4.8, 4.2% of the respondents accepted that oil exploration had highly impacted on their income, 22.5% respondents asserted that oil exploration had moderately affected their income, 33.3% considered this impact to be low, 28.3% did not see any change in their income in relation to oil exploration and 11.7% had no idea at all on the impact of oil exploration on income in their region. Lack of effect on income is related to the fact that there are limited job opportunities available to the local residents and hence life remains as it used to be before oil exploration or even worsens.

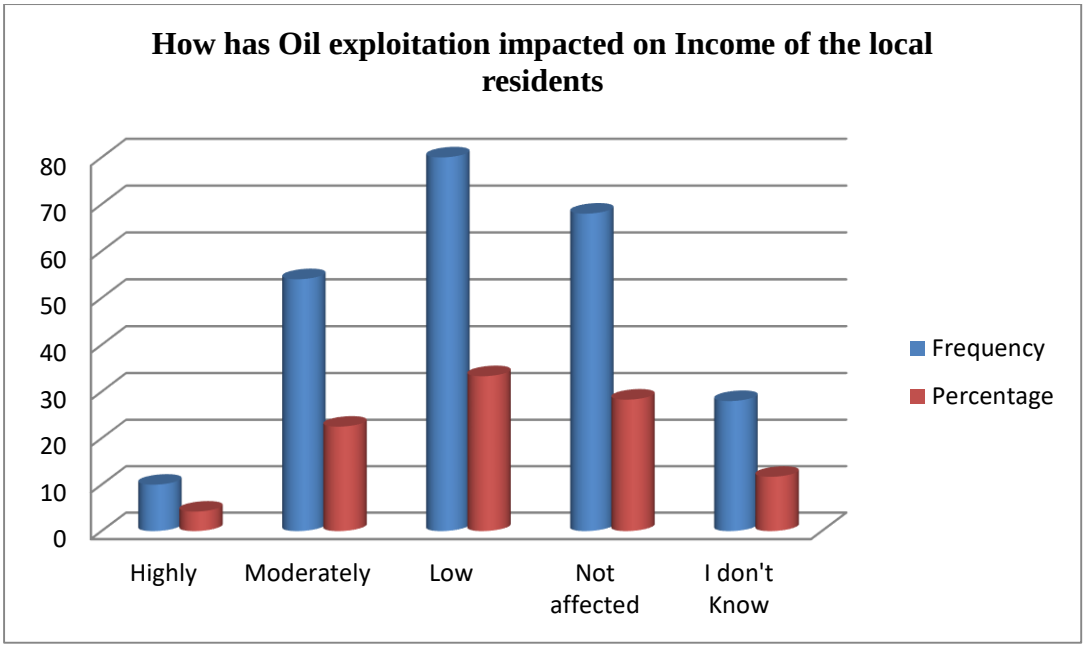

Figure 4.8: How has oil exploitation impacted on income of the local residents?
Source: Field 2018

On the issue of income and oil exploitation, one respondent said:

> *"…The presence of Tullow Oil here in our area has chased even the NGOs that used to give us relief food…even the Help age programme that used to give us cash is no longer coming since they think that Tullow Oil Company is assisting us…yet Tullow Oil has left us poorer than we were…we really do not want this oil camp here…(Interview with Akai,August 2019).*

These findings agreed with the study done by Francis (2011) in the Niger Delta which affirms that communities living near the oil exploitation sites end up being poorer than before the advent of oil industry in the region. The residents of Niger Delta have remained poor despite the fact that oil is extracted in the region. EIs look for highly skilled labour which in most cases is not locally found.

On the other hand, a document analysis of Tullow records revealed efforts of EIs to empower the local residents economically to boost their income levels. To achieve this move, Tullow Oil set up an Enterprise Development Centre (EDC) in Lokichar in 2013 (Ustawi, May 2018). This centre serves to help businessmen and women in Lokichar to

benefit from the opportunities presented by the presence of EIs in their region. The centre plays both an informative and formative role for the local entrepreneurs.

An officer of Tullow Oil said *"....Women's group in Kapese supply us (Residential camps of Tullow Oil) with foodstuffs such as vegetables, fruits and meat...."* (Interview, September, 2019). This assertion is confirmed by a woman in Kapese who said:

> *"...From our sales to the EIs, we generate millions...our children are going to good schools...many households are able to prepare a good meal...we never thought such an establishment could be here to boost our income levels...." (Interview with Ataan, August, 2019).*

Plate 3: A Picture of a Shop Owned by Beneficiary of Micro-Financing by Tullow Oil

Source: Field 2018

A document analysis of the records of Tullow Oil Co. showed that the local entrepreneurs got micro-finance support to set up business as seen in Plate 4. This is part of CSR activities of Tullow Oil Co. (Ustawi, 2018). In this way, the host community was able to engage in commercial activities like having shops. Business in

Lokichar town has grown with time due to the presence of EIs. A number of guest houses have come up in Lokichar town, a thing not in the past. Small scale business (kiosks) could also be seen in villages near the drilling sites to show some impact of the EIs on economic growth of the people.

Other economic benefits revealed by Tullow records include: Car hire, micro-finance credits and vehicle loans to the local residents. Local companies in Lokichar Basin acknowledge receipt of vehicles from Tullow Oil as a form of economic empowerment for transport services. However, these efforts were concentrated in Lokichar town and this explained the unfelt effect of economic empowerment in the larger Lokichar Basin.

4.6.3 Oil exploitation and physical capital

Table 4.11: How has oil exploitation affected infrastructural development in Lokichar Basin?

Oil exploitation and Improved infrastructure		
	Frequency	Percent
Highly	13	5.4
Moderately	74	30.8
Low	90	37.5
Not affected	45	18.8
I don't Know	18	7.5
Total	240	100.0

Source: Field 2018

The findings of the study in table 4.11 showed that 5.4% of the respondents asserted that oil exploitation had highly led to infrastructural development, 30.8% considered the impact as being moderate, 37.5% look at the impact as being low, 18.8% did not see any infrastructural development resulting from oil exploitation and 7.5% had no idea of any impact. Infrastructural development referred to here, included improvement of transport network, communication network and provision of services such as health as well as water provision. These findings showed that generally approximately 64% of the respondents do not see major infrastructural improvement even after the advent

of Oil industry in Lokichar Basin. However, there was an acknowledgement of changes though minimal. A study by Tako Koring in 2015 revealed that oil revenue in Angola led to infrastructural development in the form of building roads, railroads, schools and hospitals. This is also the acknowledgement of some residents of Lokichar Basin.

Plate 4: Picture of a Road Tarmaced By Tullow to Oil Camps from Lokichar Town
Source: Field, 2019

The host community alluded to the fact that Oil exploitation led to improved infrastructure in terms of having tarmac roads as shown in Plate 4 of a picture of a tarmac road leading to the oil camps. On the other hand, case study of Western Kordifan state in Sudan by Mahir Salih *et.al* (2014) shows that despite the oil in the region, the residents experienced scarcity of water and low infrastructural development. Like Lokichar Basin, the local residents of Western Kordofan State received water through water trucks of the Oil Co. and the roads remained in poor conditions. On interviewing one herdsman in Lokicheda, he said:

> *"…Tullow oil deceive us by putting water tanks along the road to cheat people that they have given us water…yet this is "Ngakipi a*

> *ekopo"(Turkana expression for a "one cup water"…, which cannot sustain both human life and the animals we keep…water is brought to the tanks by the Tullow trucks only once or at times twice a week and this water is expected to be both for human and animal consumption yet they carry their bottled water every time for themselves…(Interview with Lokweei, August, 2019).*

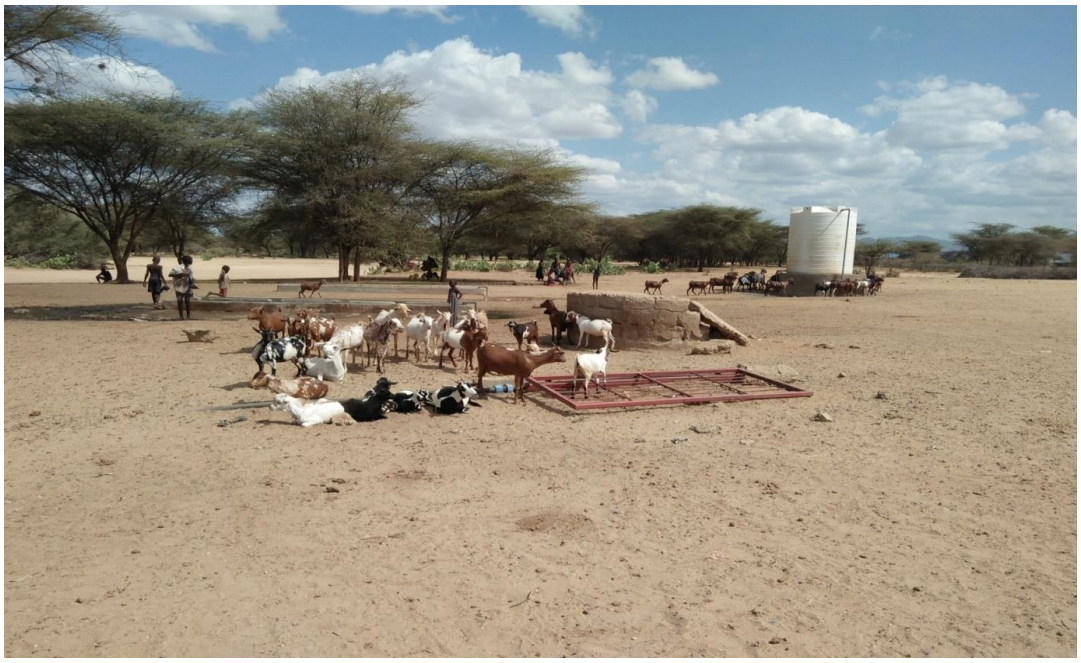

Plate 5: Picture of a Water Tank by Tullow Oil

Source: Field Work (2018)

Of course, this is an assertion that water was available but on tracking system and many times not even enough for both human consumption and for the livestock as shown in Plate 5. However, on the other hand, approximately 36% of the respondents appreciate the work of Tullow in provision of water in the region. Document analysis of Tullow Oil Co. reveal that KES 118m have been contributed in collaboration with other partners for water resources development and that Tullow Oil Co., has so far sunk 30 boreholes (Ustawi, May 2018).

Plate 6: Solar Panels to Pump Water at Kalapata

Source: Field, 2019

The EIs in the region have also improved availability of clean and safe drinking water to the host community with the use of solar panels to pump the water as indicated in Plate 6. An effort of Tullow Oil in provision of water to the community is echoed by a woman resident in Kalapata who said:

> *"….We could spend the night at a river bed because we could not go back home without water…tired and hungry…At times our families with go to bed without supper…This changed after Tullow Oil funded a water project which has positively impacted on our need for water…" (Intervioew with Naupe, Septmeber 2019)*

Another aspect worth considering with regard to infrastructural development is provision of health services to the local community as shown in Figure 4.9

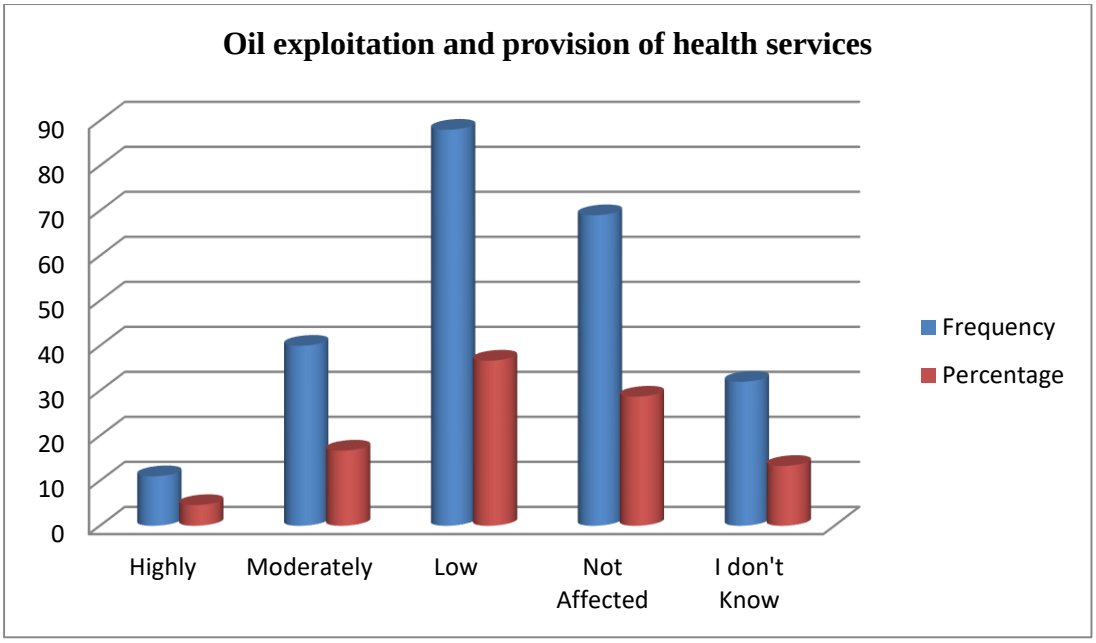

Figure 4.9: How has Oil exploitation impacted on provision of health services in Lokichar Basin?
Source: Field 2018

According to Figure 4.9, majority of the respondents (78.7%) regarded the impact of oil exploitation on provision of health services as being negligible (Low or even not at all). Provision of health services is one area that extractive industries had performed poorly according to respondents. The local residents living near areas of operations of the extractive industries experience negative health effects related to operations of the extractive industries yet they had no health facilities put in place by the investors. One case is that of women having miscarriages associated with the negative effects of the activities of the extractive industries. This loss of young unborn is associated to lack of medical services in the vicinity, which the local residents expected to have been set for them as a form of compensation for the negative consequences they are subject to due to the presence of activities of extractive industries in their area.

On the other hand, we have a minority of respondents (21.3%) who assert that the presence EIs in Lokichar Basin has led to moderate change in provision of health services. These respondents appreciate the efforts of Tullow Oil Co., in improving

health care in their communities. Tullow Oil Co. in partnership with the (Turkana County Government) TCG resorted to a cost-sharing model that resulted into blowing new wind of the wings of the region's healthcare system as shown in Plate 7. A respondent from Kasuroi said:

> *"…the presence of a health facility here means access to treatment and better health care…" (Interview with Lokuwam, September, 2019)*

Plate 7: Picture of Tullow Block at Kasuroi Health Centre

Source: Field 2019

This assertion is supported by analysis of document from Tullow Oil Co. which revealed that the Tullow Oil Co. offered assistance to health facilities such as Lokichar, Lokori, Kanamkemer, Kasuroi, Karoge and LCRH (Lodwar) as shown in Plate 8. Three of these health facilities were built by Tullow and two (Kanamkemer and LCRH) were renovated. Tullow Oil Co. as well makes small donation of medicines to several health centres in Turkana County. This confirms efforts of EIs in improving the health care of the local communities though the effects are ignorable according to the local residents.

Plate 8: Section of Lokichar Sub-County Hospital Built by Tulow Oil Co.
Source: Field, 2019

4.6.4 Oil exploitation and Human Capital

Enhancement of human capital in this study was considered in terms of the efforts EIs in improving the education sector in Lokichar Basin as well as improvement of life skills among the local residents living near the exploration sites. Based on the findings of a study by Mwesigye (2016) in the Alberine region in Uganda, the people living near the drilling sites mostly did not get jobs (though at times they would only be offered casual jobs) because of their lack of expertise (know-how) on oil-related jobs. By and large, this is a case of incapacitated human capital. Hence, "outsiders" would enjoy better jobs.

Table 4.12: Oil exploitation impact on education in Lokichar Basin

Oil exploitation and Education		
	Frequency	Percent
Highly	15	6.3
Moderately	86	35.8
Low	88	36.7
Not affected	36	15.0
I dont know	15	6.3
Total	240	100.0

Source: Field 2018

Kenya national bureau of statistics says that a total of 15% of Turkana County residents have a primary level of education whereas 3% have a Secondary level of education or above. Low level of education in Turkana County is confirmed in the findings of this study. Table 4.12 showed that 6.3% of the respondents affirmed that oil exploration had indeed impacted on education in Lokichar Basin and 35.8% expressed the impact as being moderate. On the other hand, 36.7% of the respondents considered the impact on education as being low, 15% of the respondents failed to see any change and so for them "…nothing had changed since…", whereas 6.3% had no idea of whether anything has changed or not.

This assertion of improved education sector was seen in the construction of classrooms in the schools near the exploration sites to enable the children in the region to access education. Consequently, this was a step towards enhancing the human capital of the local residents so that in future the local residents can also be able to compete in employment industry with regard to oil-related jobs. The local residents of Lokicheda appreciate the efforts of Tullow Oil Co., in building two classrooms for their children and even putting up two toilets for use in the school as shown in Plate 9. One respondent said:

> *"….Initially we did not have a High School in our region…Our children used to go far…Now we have a High School (Ngamia High*

School) here… we thank Tullow Oil Co. for these efforts…" (Interview with Lokaalimoe, 2019)

Plate 9: Picture of a Classroom Block and Toilets at Ngamia 1 High School

Source: Field (2019)

In response to this need, analysis of records from the office of social investment of the extractive industries, particularly Tullow Oil Co., revealed that young men and women from Turkana County had in the recent past been given scholarship to acquire technical skills in Technical Colleges in Kenya. Between 2017 and 2018, 60 scholarships have been given by Tullow alone for Turkana residents to study technical courses whereas Tullow Oil in partnership with KCB foundation has offered 140 scholarships for the local residents to study technical courses (Ustawi, May 2018). This is to enable the locals benefit from the technical job opportunities available in the extractive industries.

Analysis of documents of Tullow Oil Co. showed that more than 3000 children from poor background in Turkana County have benefitted from Tullow Bursaries for secondary and College education. These scholarships are run by Tullow Oil Co. in collaboration with the Catholic Diocese of Lodwar as its implementation partner. This is confirmed by a testimony of one of the students from poor family background who

has managed to go through secondary school education on Tullow Scholarship. A beneficiary of Tullow Oil scholarship had this to say:

> *"....I am the only one in my family who went to school…I was not sure of transiting to High School after primary school education because my family is poor…However, I got scholarship from Tullow Oil Co.,…this has enabled me to finish High School and now waiting to join the University…."*

Plate 10: Picture of a Learning Resource Centre in Lokichar

Source: Field, 2019

Tullow Oil constructed a learning resource centre as shown in Plate 10. This centre was for the students to be able to assess a conducive environment to study while at home. This resource centre also serves research students. Apart from being a learning resource centre, it also serves as a socialization centre with indoor sporting activities. This was a good effort in developing human capital, an important resource for sustainable livelihood.

4.6.5 Oil exploitation and Natural Capital

An important natural capital of the local residents of Lokichar Basin is land. Land in Turkana has in the past been communally owned. Hence when the local residents were asked whether they have lost land to the EIs, the response was "yes" to mean that the community has lost its precious natural capital. The presence of extractive industries has led to private ownership of land, a shift that has led to people fighting over access and control of land. On realizing that land can be exchanged for monetary gain, the local residents have organized themselves in groups to own land which they will later on lease to the extractive industries for monetary gain. Being a pastoral community, the land lost to the EIs is grazing land for their livestock. Environmental depletion caused by oil exploration have led to land degradation in Lokichar Basin.

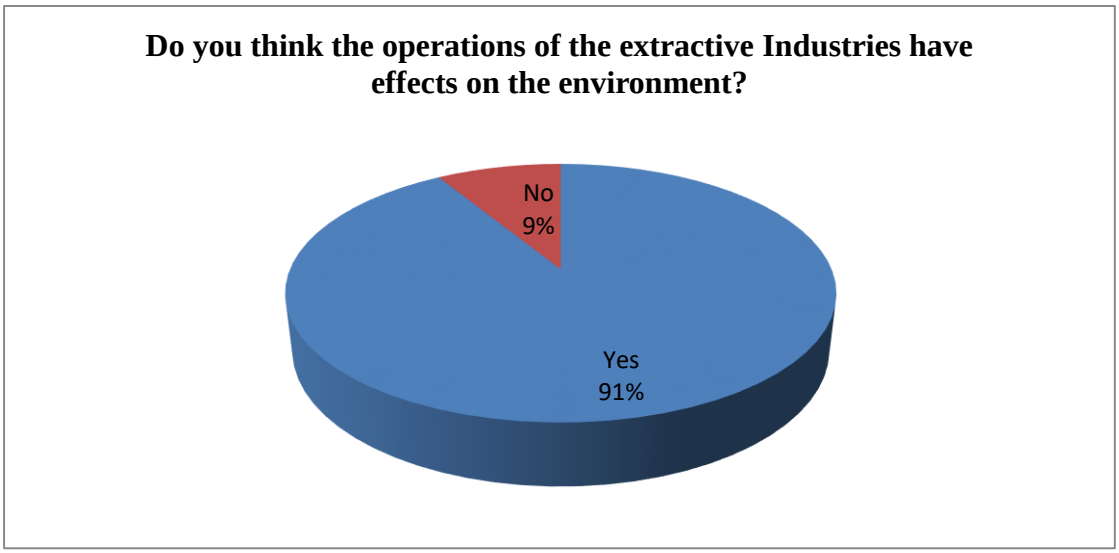

Figure 4.10: Do you think operations of the extractive industries have effects on the environment?
Source: Field 2018

The findings of this study as shown in Figure 4.10 showed that 91% of the respondents assert that operations of the EIs have affected the environment while 9% of the respondents do not agree on any environmental effects resulting from oil exploration. The local residents claim that the machines used by the EIs shook the soil and so even

if it rains, the grass does not grow as it used to be thereby rendering the soil incapable of supporting the growth of pasture necessary for their livestock.

Worse off, was the presence of unusual weeds that at times grow with the grass as shown in Plate 11. When animals feed on these weeds that grow with the pasture, the result is death of the animals. These findings were supported by a study done by Ayezaluno in the communities of Prestea, Dumasi and Teberebi in the Western region of Ghana in 2014, where residents claimed that their food production was affected due to destruction of soil by surface mining. Oil rigs destroyed the soil and rendered it infertile. This was the same experience in Lokichar Basin as a result of oil-related activities and thus posing a threat to pastoralism.

Plate 11: Picture of Strange Dangerous Weed that Grows with Pasture
Source: Field 2018

Plate 12: Waste Pit at Lomakamar Village

Source Field: 2018

Some part of the land has been used by the EIs for waste disposal. However, the methods employed by the EIs in disposing waste are not good since land is dug and is left open. This poor methods of waste disposal have led to the destruction of land and above all have affected animal health as well as human health in Lokichar Basin. One resident in Lomakamar said:

> *"….Goats give birth to things half human beings and half goats as witnessed one time…Even our women… at one time..a woman gave birth to a child with animal features…this is because of the pollution caused by the waste disposed here inappropriately by these EIs…" (Interview with Loyaran, 2019)*

A study done by Darkwach in 2010 echoes the concerns of the residents of Lokichar Basin and confirms that the women living near oil reserves in the Ecuadorian Amazon region had birth effects such as spontaneous abortion as well as delivering children with birth defects. The local residents of Lokichar Basin have also attributed the prolonged drought in the region to activities of oil exploration. One herdsman said:

> *"….Since Oil exploration began…we have experienced prolonged drought that we never had in the past…today even strong animals die due to this strange drought…"(Interview with Lokai, 2018)*

Oil and gas activities may have negative impacts on the environment and therefore need to be properly planned and managed. During the development phase, there is a lot of construction; heavy machines are used for constructing roads and preparing the well pad. The road and well pad location requires land and the activity creates noise and traffic. The traffic creates dust and may represent danger to the population. The waste from drilling activities, such as fluids used in drilling and pieces of rocks removed from the well, may contain chemicals which are harmful to people and animals.

4.6.6 Oil exploitation and Social Capital

Due to oil exploration in Lokichar Basin, there has been a great influx of people, most of them coming to the region in search of employment. This migration has led to increase in population of the inhabitants of Lokichar Basin. The foreign workers, normally referred to the local residents as "outsiders", may affect the culture and other social aspects of the community. The separate guide on social aspects provides more details on the potential impact of the oil and gas industry on culture of the local community. Figure 4.11 showed that majority of the respondent agreed that oil exploration in Lokichar Basin has led to population increase in the region. Hence, oil exploration had brought to the region "outsiders", who had come with their lifestyle in terms of their mode of doing things as well as their dressing style that will later on lead to cultural erosion in the region.

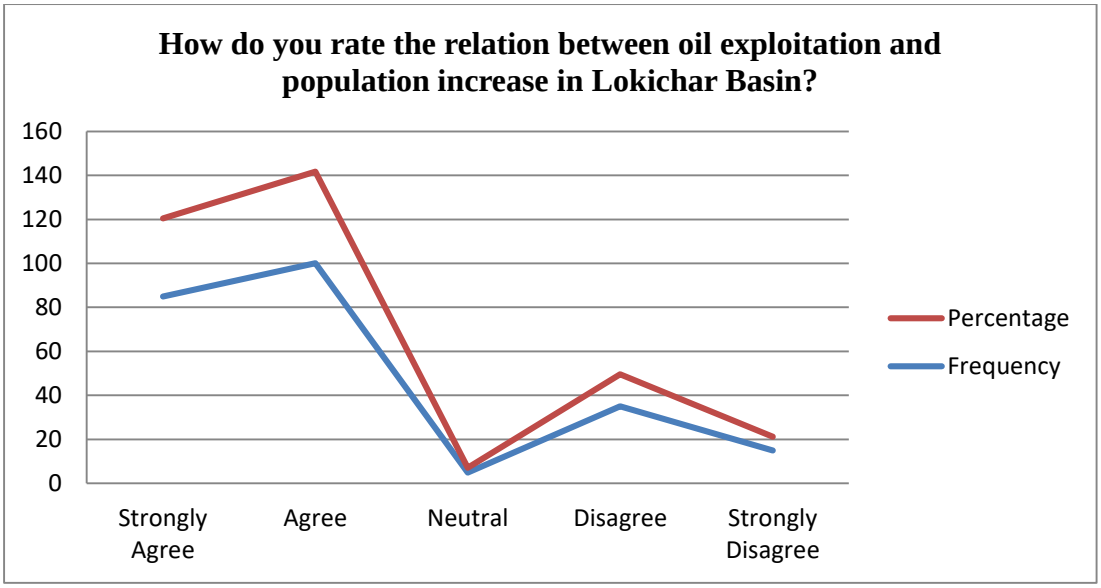

Figure 4.11: How do you rate the relation between oil exploitation and population increase in Lokichar Basin?
Source: Field 2018

Oil exploration has the potentiality of opening up local communities for new entrants and relationships as happened in Western Kordifan state in Sudan based on findings of a study by Mahir Salih et.al in 2014. The new entrants bring into the community certain cultural changes such as changes in the behaviour, changes in the mode of dressing, new business ideas and changes in relationships as shown in Table 4.13.

Table 4.13: Behavioural changes associated with cultural mix

Behavioural changes associated with cultural mix	1- Minimal 2- Moderate 3- Severe	Frequency	Percent
1	Minimal Changes	17	7.1
2	Moderate Changes	34	14.1
3	Severe Changes	189	78.8

Findings in table 4.13 indicate that majority of the respondents (78.8%) admit that the new entrants Lokichar Basin as a result of oil exploration have brought erosion into the community cultural behaviour. This is seen in the form of the practice of commercial

sex in the region as well as influence in dress code for the young people among other changes.

A respondent in Lokichar town said:

> *"…Oil exploration has brought the practice of prostitution in this town…a thing that never existed in the past…this is a blow to our traditional social set up in Turkana…." (Interview with Logiel, 2019).*

In most cases, these changes affect women and youth, who are the most vulnerable group in the society. Youth would want to adapt to the culture of the new entrants in the name of civilization and going with the changing times in society. Women would get married to the foreigners and thus get assimilated to the cultural style of the foreigners. Women may also get into the practice of prostitution in order to earn living and in this practice therefore introduce into the local community a new phenomenon of relationship that did not exist in the past.

A general consideration of symbiotic relationship between oil exploration and livelihood of the local residents in Lokichar Basin reveals that the efforts of EIs are largely average. Therefore not much that has changed in the region despite the presence of the EIs as seen in Figure 4.12: 39% of the respondents view the efforts of the extractive industries being below average, 37% rate these efforts as average, 22% of the respondents acknowledge efforts of the extractive industries as being good and 2% view them as being very good. If anything, we can conclusively say that environmental degradation and population blow represent shocks and stress associated with oil exploration and thus make the local residents of Lokichar Basin vulnerable.

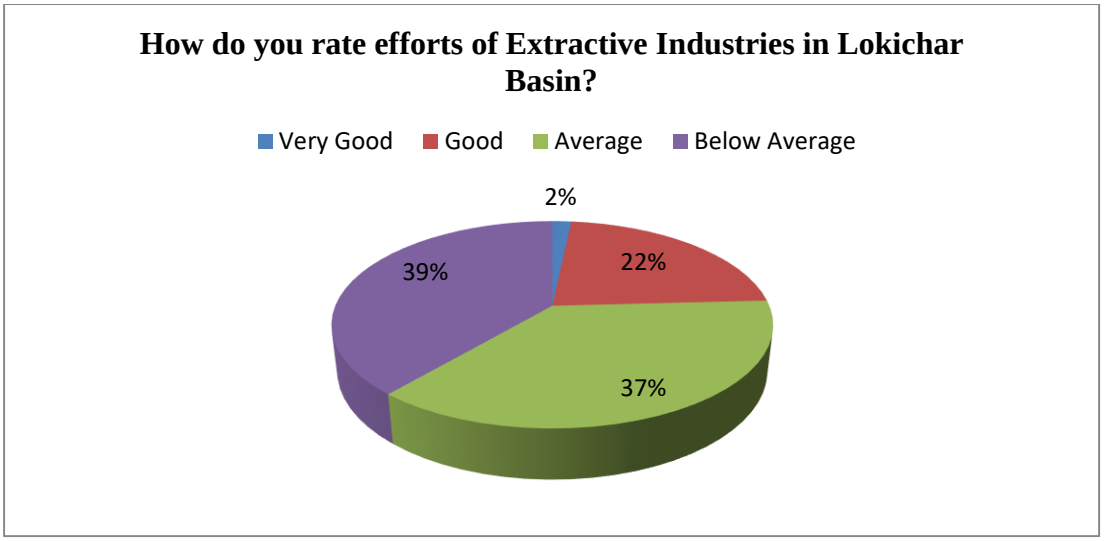

Figure 4. 12: Rating efforts of the extractive industries in lokichar basin
Source: Field 2018

By and large, this is a reflection of a community that is not yet satisfied with the interventions of the extractive industries and hence their relationship cannot be well founded. Consequently, this dissatisfaction becomes a ground of misunderstanding and hence catalyses conflicts. The local community leadership is as well not satisfied with the efforts of the extractive industries. This is an echo of the local community concerns and thus creating an atmosphere of animosity against the extractive industries. The rating of these CSR efforts is seen in the infrastructural development, creation of employment and provision of social services within the region. The respondents expressed that they cannot be able to proudly say that they have seen major positive changes in their region since the advent of extractive industries.

4.7 Obstacles People Face in Eking Livelihood during Oil Exploitation in Lokichar Basin

Oil exploitation comes with mixed feelings of both good news and bad news. This explains the famous axiom “paradox of plenty”, whereby countries are endowed with resources for improving livelihood of the people but the situations turns out to be worse. This according to many scholars has been the case with developing countries. This

study considered obstacles to oil exploration in Lokichar Basin in three dimensions: Corruption, patronage, conflicts and lack of institutional framework.

Corruption

There is a global consensus that in many countries, corruption in the EIs can deprive the local community and the entire population of resources needed to reduce poverty. *"….Just as it is not possible to not to taste honey placed on the surface of the tongue, even so it is not possible for one dealing with the money of the king not to taste the money in however a small quantity…"* (Kautilya, 4th century). This phrase confirms the inevitability of corruption.

The findings of the study in Table 4.14 showed that majority of the respondents (77.1%) are in agreement that there existed high levels of corruption in the EIs and this has hindered many people from benefiting from oil exploration in Lokichar Basin. On the other hand, a minority of the respondents (23.1%) disagree to the fact that corruption hinders management of resources whereas 5.8% of the respondents seem to be neutral and hence they neither affirmed nor denied the effect of corruption on proper management of natural resource (Oil) in their region. Corruption blocks the "trickle-down effect" in development and thus leaves a lot of wealth in the hands of a few corrupt people.

Table 4.14: Corruption as a hindrance to proper management of natural resources in Lokichar Basin

High levels of corruption is a hindrance to proper management of natural resources		
	Frequency	Percent
Strongly agree	144	60.0
Agree	41	17.1
Neutral	14	5.8
Disagree	26	10.8
Strongly Disagree	15	6.3
Total	240	100.0

Source: Field 2018

Corruption is the main reason why resource-rich countries perform badly in economic terms (Ross, 2012). This is an implication of current theories and evidence on the resource curse. This suggests that corruption is the development problem in resource-rich countries, rather than just one of a number of problems. A study done by Shah in the Niger Delta confirms that despite Nigeria's oil wealth, 90% of its citizens live on less than $2 per day because of the corrupt system in the management of oil revenue. From focus group discussion, it came out clearly that corruption in the EIs is manifested through nepotism, favouritism and bribery for award of contracts and even employment. One respondent from Lochwa said:

> *"…People get employment in Tullow Oil after giving bribes…Some are employed because they are relatives of community leaders…Even to get a contract of supplies to the EIs…one has to bribe…corruption…corruption…everywhere…."*

These findings of corruption being manifested in nepotism and bribery are in agreement with the findings of the Institute of Global Security Analysis done in the Middle East in 2015. According to this report, most states in the Middle East, despite having large reserves of Oil have seen slow economic development due to corruption. Corruption here is manifested through nepotism, tribalism, clanism and "kickbacks" for award of favours. In the long run, money remains in the hands of a few and the majority of the population is rendered poor.

Patronage

Corruption in resource-rich countries takes two main forms, namely, rent-seeking and patronage, both of which are economically costly. Patronage is a way of maintaining power over people. This is one strategy used mostly by politicians in order to stamp their authority over the electorates. Table 4.15 showed that 5.8% of the respondents felt that the local community can benefit to a high extent if represented by elites and politicians, 17.1% of the respondents felt the extent of benefiting was moderate whereas

majority of the respondents (77.1%) felt that the local community accrued low benefits if represented by the elites and politicians.

Table 4.15: Community feeling on representation by elites and politicians

The community can benefit more if represented by elites and politicians		
	Frequency	Percent
High extent	14	5.8
Moderate extent	41	17.1
Low extent	185	77.1
Total	240	100.0

Source: Field 2018

The feeling of the local residents living near the oil exploration sites was that patronage had led to their suffering in the sense that the so called "politicians and elites" who have taken the patrimonial role have always done so for their own benefits. The civilian leaders feel more need to show up their political support by giving out contracts and favors' particularly for their own supporters. Benefits accrue to a small group of ruling elite and politicians presenting themselves as "opinion leaders" while the general public remains deprived of opportunities for economic and social advancement.

One respondent from Kalapata said:

> *"….Politicians and elites pursue their vested interests from the EIs in the name of representing us…Many times we hear they have gone to meet in Nairobi to speak about oil exploration but we have never seen any fruits…they only go to get allowances…Contracts in the EIs are awarded to their own family members and close friends….these elites and politicians are our "pests"…they will eat all in our name…" (Interview with Lokeno, 2018).*

The danger of patronage in development is supported by findings of Varkey in 2013 in Malaysia in regard to political interference in the management of natural resources for the benefit of their supporters. For example, in the state of Pahang on the Peninsula, timber licenses were awarded to a range of different groups, ranging from the members of the Pahang royal family to some penghulu (village headmen), former high ranking

members of the armed forces, dignitaries, as well as non-ranking members of political support groups, especially around election time. The same is experienced in Lokichar Basin whereby opinion leaders (elites and politicians) always seek the interest of their own in terms of employment and even award of contracts from the EIs.

Inadequate institutional and legal framework

The mismanagement of funds is symptomatic of the broader institutional and legal capacities to manage the development of EI for the benefit of the country as a whole. Figure 4.13 showed that majority of respondents (64%) confirmed that there was inadequate institutional and legal framework in the management of natural resource find in Turkana County while a minority of the respondents (22%) did not see the absence of legal and institutional framework as a hindrance to the management of natural resources found in Lokichar Basin. The absence of an institutional and legal framework opened a window of corruption or if you like, this created a loophole of corruption. A study by Gauther in Cameroon in 2011 confirms the fact that absence of an institutional and legal framework hindered proper management of Oil in Cameroon.

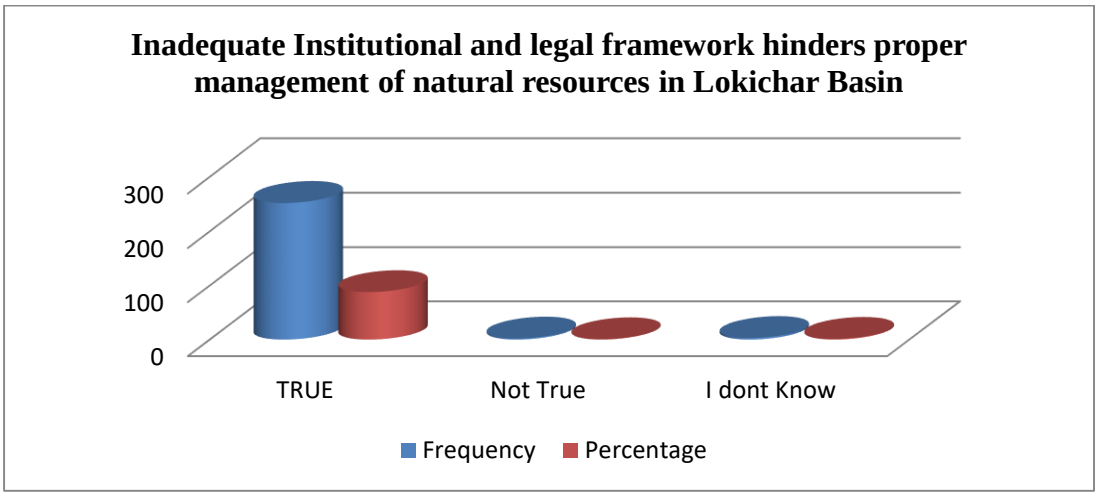

Figure 4.13: Inadequate institutional and legal framework causes conflicts
Source: Field 2018

Due to the gap in the rule of law, revenues from EIs often concentrate wealth and power in the hands of the few, thereby exacerbating inequality, poverty and levels of

corruption. This legal gap opens ground for the mismanagement of resource benefits thus leading to dissatisfaction which consequently leads to conflicts. This economic disequilibrium has rendered Oil a curse in Cameroon since many have remained poor despite the resource abundance which has ended up in the hands of a few with political power.

This legal and institutional gap is confirmed by the response of the MCAs and opinion leaders in Turkana County. By and large, the establishment of legal framework is on course as put by one MCA:

> *"…Legal policy of engaging EIs is under discussion and soon we shall have it in place…"*

The findings of the study in Table 4.16 showed that 80% of the respondents confirmed that there is no legal policy in Turkana County with regard to the EIs, 6.7% asserted its existence but not implemented while 13.3% did not know whether there is a policy or not.

Table 4.16: Does Turkana County have a policy on extractive industry?

Does Turkana County have a policy on extractive industry?		
	Frequency	Percent
Yes	1	6.7
No	12	80.0
I dont Know	2	13.3
Total	15	100.0

Source: Field 2018

A study done by Baumuller in Camerron in 2011 revealed that prior oil exploration there was no legal framework and so everything was left in the hands of the President to make decisions: Contracting of Companies, Lease of land for use by the EIs and production agreement among others. Hence Oil has been a curse for Cameroon due to poor governance.

Interview with local respondents of Lokichar Basin is in agreement with these findings. A respondent said:

> *"….We have no idea of the dealings of the EIs….We were told that the President of Kenya has allowed the Tullow Oil to carry out Oil exploration in our region…Any financial gains from the EIs is known best by the GOK and its leadership…" (Interview with Ekal, 2018).*

This lacuna was perilous as there existed no guideline on the dealing of extractive industries and it also opened room for corruption and manipulation especially of the local community. In this case then the government takes advantage of the vulnerability of the local communities living near the exploration sites. Lack of adequate institutional and legal framework contributes to the high levels of secrecy in the EIs sector. As expressed by Ross (2010), the EIs is highly secretive. As a result, there is lack of transparency and hence a gap of information that leads to mistrust in the parties concerned. Kenya fell in the same foot as Cameroon because the exploration of Oil in Lokichar Basin kicked off before the establishment of a sound legal framework though relevant steps have been taken by the GOK in the enactment of Petroleum Bill 2017.

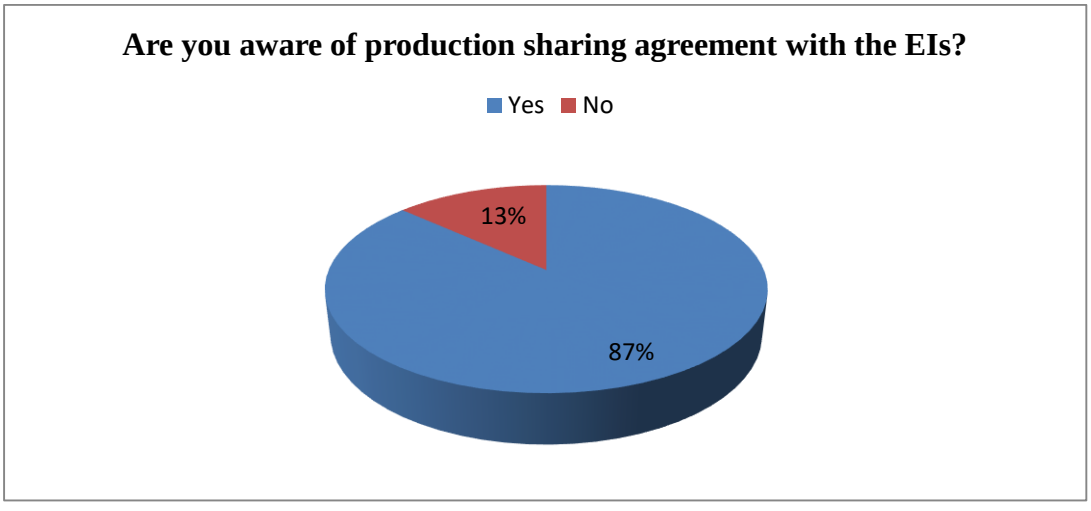

Figure 4.14: Are you aware of production agreement with EIs?
Source: Field 2018

This study found out that 87% of the local residents of Lokichar Basin were aware of the production agreement between the GOK and the EIs whereas 13% claimed not to

be aware of the production sharing agreement as shown in Figure 4.14. However, it is not clear to these local residents on how they will benefit from the Oil revenue because the information they have on benefit sharing is vague. For this reason, the local communities accuse the leadership of secrecy and lack of transparency. Some of the pressing questions that are being raised throughout Africa relate to how the population can benefit from extractive industries, and how local content can be promoted. The proposed production sharing agreement was as seen in Table 4.17. Host community in this agreement are those living near the oil camps and they are considered separate from the entire local Turkana County Community since they are the ones who experience a lot of the negative impacts of the oil-related activities.

Table 4.17: Proposed production sharing agreement

Component	Percent Oil Revenue
Host Community	(a) Offered 5% (b) Contested 10%
County Government (Trustee)	(a) Direct 20% (b) Unspecified amount from the National Government

Source: FAO, 2018

The local residents claim that at the launch of the EOPS in Ngamia 1 in July 2017, the agreement was that they (local community) would be given their 5% share in form cash transfer but to their surprise things changed as soon as the first truck carrying oil to the refinery were released. On realizing this was mischief, the local community then resorted to block further transportation of crude Oil from Turkana County.

One respondent had this to say *"....Kipiak nakad..."* to mean that We need to be given our share in form of cash transfer to our personal accounts without which we cannot let oil be transported outside Turkana…" The local residents argue that the only sure way they can directly reap the benefits of the natural resources on their region is through getting cash transferred to their accounts just like the famous *"lopetun"* in the County.

If benefits are distributed in a manner that appears unfair as compared to the distribution of the costs, risks and responsibilities, then those who are disenfranchised or bearing risks and responsibilities without fair compensation will rebel. It is this then that explains why the Turkana people are not happy with the percentage given to them and even worse that they cannot get the revenue in form of cash.

Conflicts

Taking into consideration the prevalence of corruption, detriments of the practice of patronage and the absence of legal and institutional framework for meaningful engagement found by this study, it is clear then that Lokichar Basin is a theatre of conflicts as has been in many developing countries endowed with Oil. This is due to dissatisfaction on the part of the local communities living near the exploration sites. This study discussed oil-related conflicts from the point of view of the factors contributing to conflicts, nature of these conflicts and effects of these conflicts on both the EIs and the local community.

Exploitation of natural resources has often been cited as a key factor in triggering, escalating or sustaining violent conflicts around the globe. African countries endowed with natural resources, especially oil have seen violent conflicts due to poor management of the natural resources. Violent conflicts emerge largely where local communities have been systematically excluded from decision-making processes and when the economic benefits are concentrated in the hands of a few thereby causing economic disequilibrium in the society.

Majority of the respondents acknowledge that there oil exploration has led to conflicts in Lokichar basin whereas a minority of the respondents deny the prevalence of oil-related conflicts as seen in Figure 4.15. The few respondents who said no to the prevalence of conflicts are those from Katilia ward who so far have not experienced

any conflicts given that Ol Suswa Co. that is concerned with Geothermal has not actually gone into major operations in their area. These residents are yet to see if there will be any conflict arising from exploitation of Geothermal.

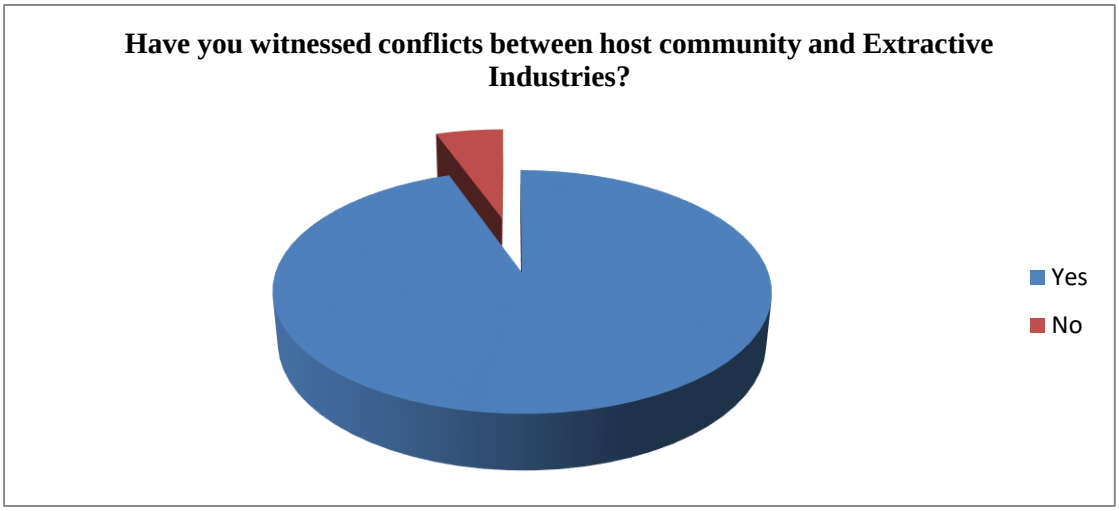

Figure 4.15: Conflicts between host community and extractive industries
Source: Field 2018

Natural resource conflicts arise when parties disagree about the management, distribution and protection of natural resources and related ecosystems. The findings of this study agree with the study by Idemudia in the Niger Delta in 2010 that Nigeria has been a theatre of oil-related conflicts and hence the legacy of oil exploration can be said to be the persistent conflicts. The local communities where Oil exploration is taking place in Lokichar Basin have on many occasions demonstrated against extractive industries due to disagreement on certain issues.

The nature of the oil-related conflicts in Lokichar Basin is tripartite: Upon looking at the conflict parties, majority of the respondents (77.1) assert that the parties in these conflicts are mainly Tullow Oil Co. and the local residents living near the oil sites of course in collaboration with the residents of the larger Turkana County as shown in table 4.18. On the other hand 17.1% of the respondents say that at times the conflict

parties are the local residents and the GOK while a minority of the respondents (5.8%) consider the conflicts to be between the host community members among themselves.

A close look at the major parties to the conflict brings Tullow at the centre and the local community hence the assertion of the majority of the respondents holds water. Looking at the nature of this conflict, the respondents are worried that extractive industries in their area will leave one legacy.

Death is the only legacy that extractive industries will leave in Turkana County as asserted by one elder:

> *".....Ebunit akmiet na ka Tullow keng amunyar Ngiturkana…Akitu bon kidarit…(Conflicts associated with Extractive industries will finish us…we are only waiting for death as a result of the presence of extractive industries in this region…"(Interview with Loteleng, 2018)*

Table 4. 18: Parties to conflicts associated with extractive industries

Parties to conflicts associated with extractive industries		
	Frequency	Percent
Tullow Oil and host community	185	77.1
Host Community and GOK	41	17.1
Host Community members	14	5.8
Total	240	100.0

Source: Field 2018

This assertion goes in line with the words of Amstel Monday Gbarakpor who had this to say on exploration of oil in Nigeria "……The only legacy that oil has brought to Niger Delta is death…"Apparently the Oil in Turkana County is likely to leave the same legacy of death given the perilous situation of conflict.

At times the local community demonstrates against the GOK especially when the local community feels not protected and supported by the government when they feel short-changed by Tullow Oil Co. as seen in the placard in Plate 12. The local respondents always seek protection from their government and in the event that the government is

not performing as expected then the local residents demonstrate against the government as a wake-up call to the government. This then is the case in Lokichar Basin.

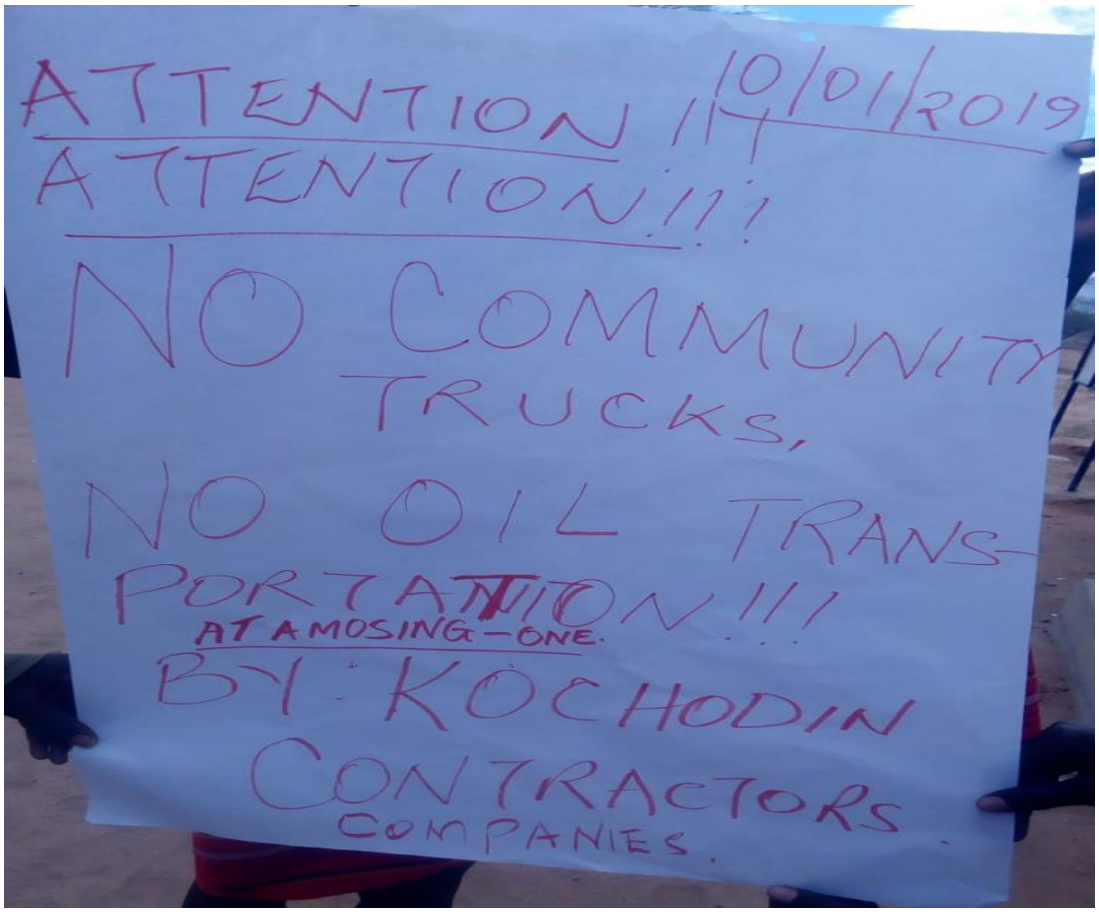

Plate 12: Picture of a Placard during Demonstrations against Early Oil Pilot Scheme

Source: Field 2019

Some of the respondents agree that at times there is conflict between themselves in the case where for example one community member loses a job and replaced by another which brings a feeling of mistrust between community members.

One respondent had this to say in regard to intra-community conflict:

> *"....Kiteremok kolong sua Tullow kotere na ipusia ipei etic sodi kigir nabo nice...Atamasi robo..ekwa ca been ati kisipusi ayong emoit.."*
> (…When a member of a community loses his/her job the feeling is that the one who has taken their place is the cause and in this case the replacement of a fellow community member…)

Plate 13: Picture of a Discussion with Stakeholders in Lokichar Basin Led by Fr. Paul Areman (Researcher)

Source: Field 2019

Following group discussion with stakeholders in Lokichar Basin as shown in Plate 13, the major factors that contributed to conflicts in the region were:- Limited employment opportunities; Poor engagement of local community; Unclear benefit sharing scheme; Weak institutional and legal framework; Scramble for land possession and lack of compensation to the host community.

A study in the Niger Delta carried out by Idemudia in 2010 found out that violence and sabotage of oil pipelines increased sharply as a result of limited employment opportunities, inequitable sharing of oil revenues, environmental degradation and threat to their livelihood. This confirms the situation in Lokichar Basin. The local community feels disrespected when their views are not considered. When the local residents are poorly engaged, marginalised or excluded from the dialogue in the development process, they are almost certain to begin to oppose the development.

Young people who are unemployed are at the risk of being used to cause conflicts and given their situation they go into it since they consider themselves as having nothing to lose after all. Extractive industries have scored low in creation of employment and thus young people who are looking for employment shift their energy and time to demonstrate against extractive industries.

Land in Turkana community is communally owned from time immemorial but the presence of extractive industries has led to private ownership of land, a shift that has led to people fighting over access and control of land. On realizing that land can be exchanged for monetary gain, the local residents have organized themselves in groups to own land which they will later on lease to the extractive industries for monetary gain. These local land groups have led to clashes among community members.

Land tenure contributes to conflict when land ownership, management and access are deemed to be unjust or unequal, or when customary practices conflict with formal laws. Pastoralists have lost their grazing land to the extractive industries and so they can in no way bring their animals to graze anywhere near the residential camps or working sites of the extractive industries. Any attempt to access grazing land near the established camps of extractive industries has been futile and thus a cause of dissatisfaction from the side of the local community.

The local community have had issues with the extractive industries especially Tullow Oil Co. on grounds that they have not been compensated yet they bear the consequences of their activities and above all especially because they gave land to the extractive industries for their residential camps and other activities. Among the consequences for which the local community requires compensation include: Degradation of the local environment, loss of land and displacement which have direct impacts on human health and the productivity of agriculture and other forms of traditional economic activity.

Conflicts associated with extractive industries have a double-fold effect such that they affect both the local community and the extractive industries. This means that both the local community and the EIs feel the impacts of oil-related effects and this each of them bears the consequences of these conflicts.

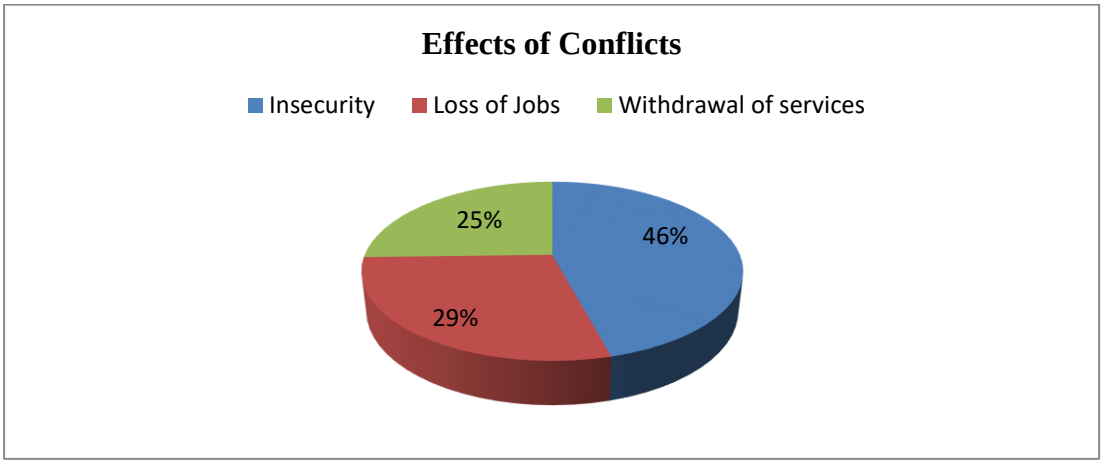

Figure 4. 16: Effects of Conflicts
Source: Field 2018

The study found out that 46% of the respondents saw insecurity being in the rise a as result of conflicts associated with extractive industries as seen in Figure 4.16. When the activities of the extractive industries are on, usually there are patrols on the road and hence people move freely from one point to another. Some of the places taken by extractive industries as residential camps are insecure and so the daily patrols by the vehicles of the extractive industries boost security of these routes. At the same time, employees of the extractive industries are also insecure and thus sent away from the residential camps when there is a conflict in the fear of the residential camp being raided by the locals.

29% of the respondents pointed out loss of jobs as an adverse effect of the conflicts. Those employed by the extractive industries lose their jobs since no activity goes on at the time of conflict. This also affects the extractive industries since their work comes to a standstill and thus costing them. This is manifested in the closure of roads to

prohibit entry into or exit from the oil camps as shown in Plate 14 of a picture showing roads closed.

Plate 14: Picture of a Road Leading to the Oil Camps Closed Due To Conflicts
Source: Field 2018

This will eventually lead to slow recovery of cost of production and thus no maximization of profit on the part of the extractive industries. This is intertwined with a drop in business gain since no cash flow from both sides. Hence even local business falls in terms of profitization. A businessman in Lokichar had this to say *"…Whenever there are conflicts between EIs and the local community, we experience a great business loss given that no cash flow..."*

25% of the respondents argue that when there is conflict between the local community and the extractive industries, the services given to the community are withdrawn. One respondent said: *"…When we are in conflict with extractive industries…water supply with the tankers is stopped and so we do not get water as usual…"* This withdrawal of

service provision goes to the extent of even not availing bursary funds for students' fees.

A study done in South Sudan by the Oxford Institute for Energy Studies in January 2019 found out that conflicts in South Sudan are resource-based (Oil-related). Consequently, these conflicts have led to the closure of United States and slow progress in the Upper Nile. Therefore, both the local community and the EIs bear the consequences. Conflicts have also been known to be a hindrance to development. Turkana South and Turkana East Sub-Counties, where Lokichar basin lies, have for a long time been insecure areas due to cattle rustling. This situation is now exacerbated by the conflicts associated with oil activities. In such scenario, little can be achieved in terms of socio-economic progress.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

In summary, the study found out that the local residents in Turkana County needed time to reorganize themselves in terms of adapting to the shift of livelihood from pastoralism as posed by the discovery of oil in Turkana County. Even then the local Turkana residents have devised survival strategies to cope with the threats to pastoralism associated with discovery of oil in Turkana County.

The local community is to a good extent involved in the decision-making process with regard to the operations of exploration activities. The local communities living near the oil exploitation sites have expressed their awareness of some activities of the EIs.

Oil exploitation has significantly changed the face of Lokichar Basin. There are benefits accrued with the presence of EIs in Lokichar Basin in terms of enhancement of livelihood resources. To this, some of the local residents have expressed their satisfaction on the CSR activities of the EIs. However, to the contribution of better living standards of the local residents in relation to oil exploitation, there are mixed feelings which means that a lot still needs to be done by the EIs so as to contribute to sustainable livelihood and improved well-being of the residents of Lokichar Basin.

There exist certain hindrances experienced in oil exploration in Lokichar Basin. These obstacles are double-fold: internal and external. Internally, the local residents have no capacity to benefit and even participate fully in the oil exploitation activities. Externally, the GOK and the EIs are taking advantage of the vulnerability of the local residents. Consequently, oil exploration in Lokichar Basin is likely to take the same path as seen in many developing countries as a result of poor management of natural resources.

5.2 Conclusions

It is evident from this study that, pastoralism which has been the main economic activity of the people living in Lokichar Basin, is in danger of extinction. This is attributed to the loss of grazing land as well as the climate change resulting from the environmental effects of the oil exploration in Lokichar Basin. Hence the exploitation of oil has brought shock and stress to the primary source of livelihood of the local residents of Lokichar Basin.

The involvement of the local stakeholders, especially the County Government of Turkana, for the benefit of the local communities, was optimal given the presence of legislature on oil and gas extraction in Kenya and also because of the fact that agreements made so far were between the government and the oil company.

Oil exploration has contributed to the improvement of the living standards of the residents of Lokichar. Hence we can conclude that as a result of oil exploitation in Lokichar Basin, the local residents have achieved a minimum descent living. This is manifested in the infrastructural development, business growth, provision of health services and safe and clean water as well as construction of classes in schools. Even then, the local residents consider these advancements as not to their expectations.

As a result of oil exploitation, the local residents are prone to certain shocks and stress which consequently render them vulnerable. The danger of extinction of pastoralism is a shock to the local residents: Loss of land, a major livelihood resource of the local residents is minimally accessible for grazing their animals; prolonged droughts will lead to the death of livestock; and the low levels of education in the region deny the local residents the opportunity of getting skilled employment. The presence of "middle-men" in the name of community opinion leaders (Patronage) is a great hindrance to the trickle-down effect such that a few powerful people enjoy the benefits of the oil

exploration and the majority remain poor. This is manifested in the corrupt dealings that are led by greed. The breeding ground for all this is the lacuna in the legal framework.

5.3 Recommendations

5.3.1 People-Centred Oil Exploitation

There is need for meaningful engagement of local communities in the activities of the extractive industries. Constant engagement enhances the relationship between the local community and the extractive industries. Engagement of local community leads to them owning the natural resource in their region and a sense of being valued. This can be promoted through consultation and enabling the local community to be active participants in the management of the natural resources found in their area.

The local residents are likely to lose their pastoral way of life due to reduction of grazing land and fragmentation of grazing lands and therefore it is important that they are also involved in the proposed projects that would otherwise help them cope with the change of life style. For these projects to be helpful to the livelihood of the Turkana residents, it is therefore vital that the local people are part of the decision making. Full participation of the local people helps to remove mistrust and frayed relationship between the locals and the government and the Tullow Oil Co.

5.3.2 Institutional and Legal Framework

To achieve economic development, poverty reduction and job creation, a country must have strong institutions. The three arms of government (Legislative, Executive and Judiciary) need to be empowered with necessary capacity. This can bear good fruit in democratic governance. Administration of justice will prevent corruption within the oil industry in order for all Kenyans to realize the full benefits of the oil find. The rights of

the local residents as well their welfare will also be respected and well taken care of in such environment.

Kenya needs to establish a legal framework for the oil and gas sector. These laws should not only spell out environmental concerns (environmental protection) or production contracts but rather these legislations should also spell out the benefit-sharing policy that includes the share of the local communities living close to the oil-producing areas. In this way then the local residents of Turkana County will be clear on their share of the oil revenue.

5.3.3 Transparency

Kenya should be able to make its dealings with the oil company public, that is, make public what the GOK receives from the oil company and also make public the expenditure from the oil revenue. This means that Kenya should make public all data concerning revenues from oil and what they are sued for, and also make public the identity of a bidder and documents of bidding. This is in accordance of the words of Aristotle, a great philosopher *"…to protect the Treasury from being defrauded, let all money be issued openly in front of the whole city, and let copies of the accounts be deposited in various wards…"*. Kenya should therefore be a voluntary member of the Extractive Industries Transparency Initiatives (EITI).

Transparency creates an opportunity to establish strong institutional response to the risk of political influence on the oil revenues. Transparency helps to fight corruption in a system. It is important to make public information because this reduces suspicion and enhances trust between the parties involved. The local community ought to be aware of activities of extractive industries which they seem to be vaguely known and hence breeding suspicion. A vigorous and diverse mass media is an essential cornerstone of a free and open society, and helps to establish and maintain transparency. Strengthening

their capacity and independence thus becomes a critical component of efforts aimed at ensuring that revenues are invested in the public interest.

5.3.4 Investment in Livelihood Resources

Education Fund

The high levels of poverty in Turkana County has accounted to the low levels of education because some people ended their education in Primary Schools because they could not afford to pay fees for secondary school education. There are also cases where children in Turkana County cannot attain tertiary level education due to inability to pay fees. The local residents in Turkana County are calling for the establishment of Education Fund that would support the brilliant children to access not only secondary education but also tertiary level education so that in future their children can as well take up skilled jobs created through oil exploitation.

Establish Micro-credit scheme

The local residents have gone to business as an alternative means of livelihood given the threat posed to pastoralism with the advent of oil operations in Turkana County. The local residents of Turkana County are asking the GOK to empower them economically through capital for business as a source of hope of life upon losing their means of livelihood (Pastoralism). The GOK can set a micro-credit scheme for the local residents to apply for loans to start business or to expand business for those already in business.

The management of this scheme should be in the hands of a board that brings together the local stakeholders and representatives of local communities from the oil-producing areas. For purposes of benefit, the local residents can be encouraged to form associations through which they can apply for loans from the loan management board.

The idea of boosting business in Turkana County is founded on the fact that there will be influx of people from other parts of Kenya and even outside Kenya to Turkana County and these migrants would offer good market for business in Turkana County.

Train personnel on oil-related jobs

The local residents of Turkana County would wish to make maximum benefit from the oil find in Turkana County. With this in mind, the local residents of Turkana County are asking the Tullow Oil Company to offer more chances to their children to go and undertake studies on oil-industry related jobs so that they can come and take up skilled jobs in the oil camps in Turkana County. This for them will be an assurance for them to reap the benefits of the oil find in their region.

Barter Contracts

Kenya can embrace barter contracts. This means that instead of selling oil for cash, the country (Kenya) can trade its oil directly for the public goods, especially infrastructural development. Tullow oil can be tasked to improve the infrastructure in Turkana County in exchange of oil. The roads in Turkana County are in poor conditions and even the road connecting Kitale to Lodwar is the worst road in Kenya. Other essential services that need to be brought to the local residents are building of schools, better health facilities, construction of higher institutions of learning, and setting of police posts to facilitate socio-economic development.

Direct distribution to the Citizens

Kenya can opt to distribute oil revenue directly to citizens. This is the cry of the local residents in Lokichar Basin as echoed by one famous elder "…kipiak nakad…" (Put in the ATM Card). This is one way of ensuring sharing the benefits of oil wealth and hence it would help the country to avoid some facets of oil curse. Direct distribution of funds

to citizens would help to keep part of government petroleum revenues away from politicians who may want to steal and thus give the citizens powerful incentives to monitor their government use of resource revenues. Biometric and electronic cash transfer technologies can be used to identify eligible citizens for cash transfers and ensure that they get their cash. The use of such technologies mitigates any chances of corruption and abuse of any sort.

5.4 Suggestions for Further Research

There are a number of areas yet to be researched with regard to Oil exploration in Lokichar Basin. One area of interest is the contribution of oil exploration to insecurity in Lokichar Basin.

Another area of research can be management of expectations of the local people. The local residents of Lokichar Basin have a lot of expectations on the benefits of oil exploration and this at times explains the conflict between the local community and the EIs.

It will also be of great interest to research on climate change and oil exploration in Lokichar Basin.

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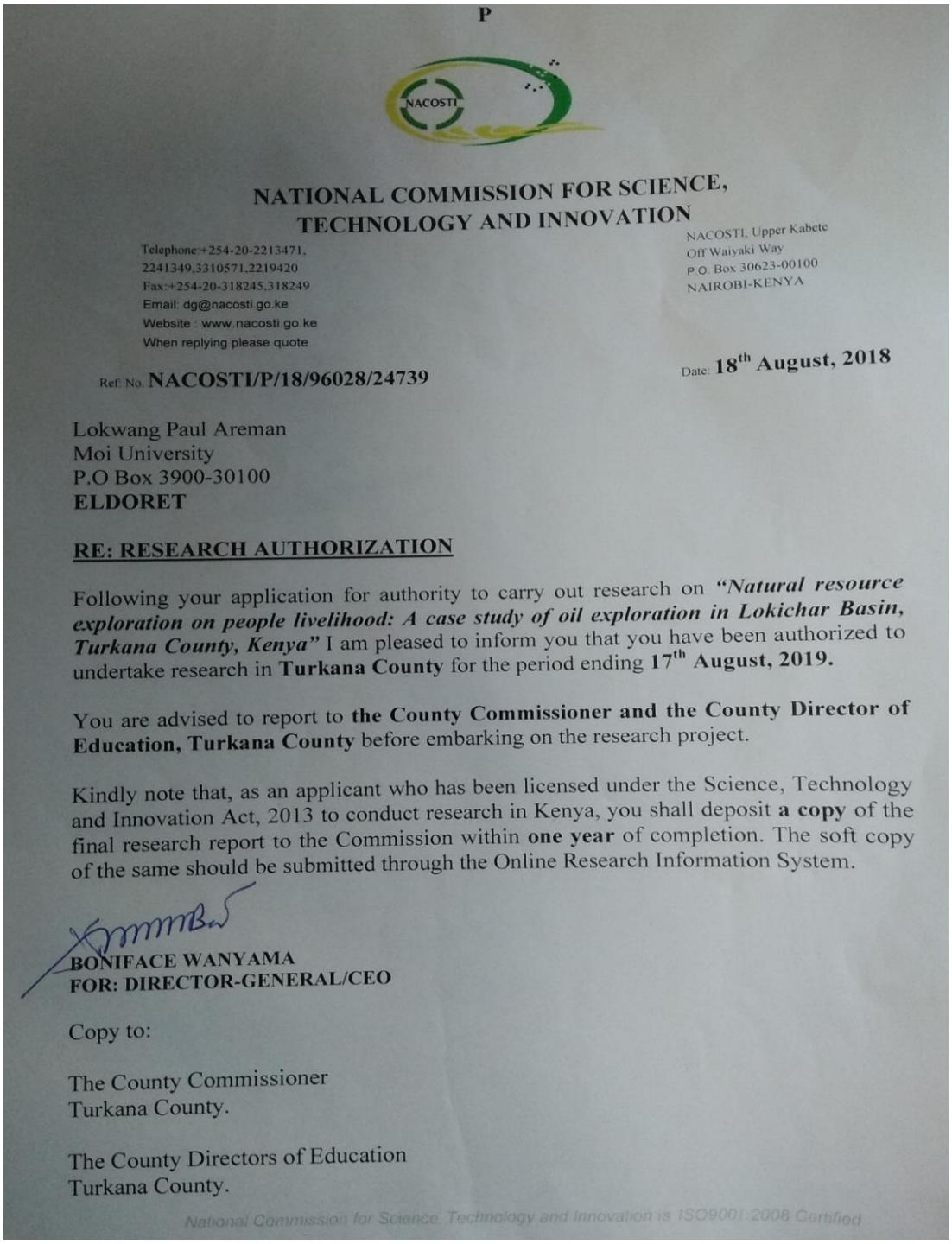
APPENDIXES

Appendix I: Research Letters



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NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/18/96028/24739**

Date: **18th August, 2018**

Lokwang Paul Areman
Moi University
P.O Box 3900-30100
ELDORET

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Natural resource exploration on people livelihood: A case study of oil exploration in Lokichar Basin, Turkana County, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Turkana County** for the period ending **17th August, 2019.**

You are advised to report to **the County Commissioner and the County Director of Education, Turkana County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

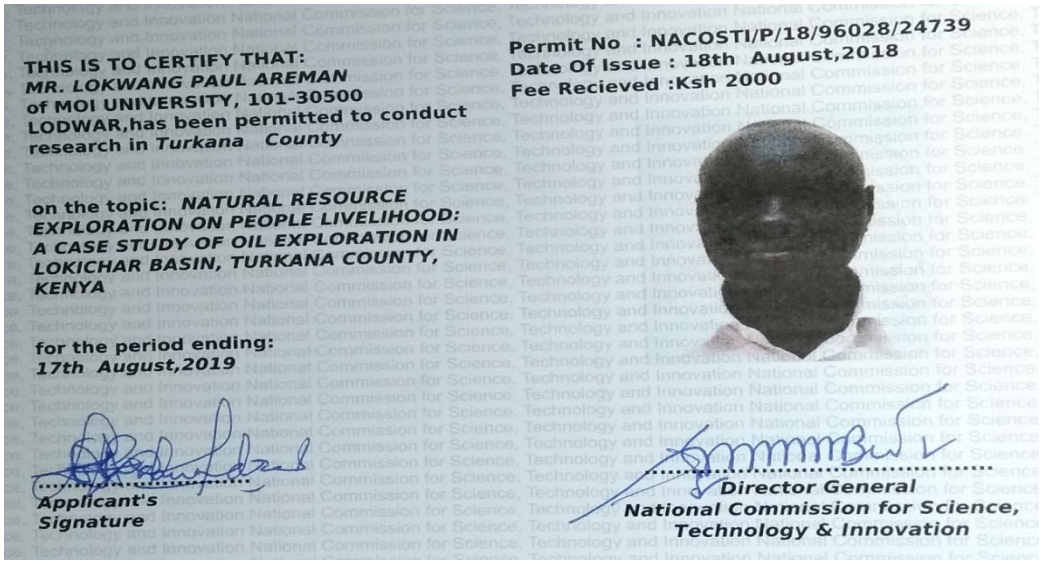
BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Turkana County.

The County Directors of Education
Turkana County.

National Commission for Science, Technology and Innovation is ISO9001: 2008 Certified



THIS IS TO CERTIFY THAT:
MR. LOKWANG PAUL AREMAN
of MOI UNIVERSITY, 101-30500
LODWAR,has been permitted to conduct
research in *Turkana County*

on the topic: *NATURAL RESOURCE EXPLORATION ON PEOPLE LIVELIHOOD: A CASE STUDY OF OIL EXPLORATION IN LOKICHAR BASIN, TURKANA COUNTY, KENYA*

for the period ending:
17th August,2019

.....
Applicant's Signature

Permit No : NACOSTI/P/18/96028/24739
Date Of Issue : 18th August,2018
Fee Recieved :Ksh 2000

.....
Director General
National Commission for Science, Technology & Innovation

MOI UNIVERSITY

ISO 9001:2008 CERTIFIED INSTITUTION

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF DEVELOPMENT STUDIES

Tel: (053) 43620
(053) 43153
Fax: (053) 43153

P.O. Box 3900
Eldoret
KENYA:

6th August, 2018

TO WHOM IT MAY CONCERN

RE: AREMAN L. PAUL - SHRD/PH.DD/DD/04/15

This is to confirm that the above named person is a bonafide student in this University attached to School of Business and Economics, Department of Development Studies pursuing a PhD course in Development studies. He has completed his course work, Defended proposal and is due for research.

Any assistance accorded to him will be highly appreciated pending completion of his studies.

Should you have further enquiries, please feel free to contact the undersigned.

DR. S.K. KIPSANG
HOD, DEVELOPMENT STUDIES

Appendix II: Household Questionnaire

Dear Sir/Madam

I am Areman L. Paul, a student at Moi University, Reg. No. SHRD/PHDD/04/15, undertaking a Phd in Development Studies. I am carrying out a research on "Natural Resource exploitation and People's Livelihood: A Study of Oil exploitation in Lokichar Basin, Turkana County, Kenya".

Any response or information given is solely for academic purposes. Kindly answer the questions provided. I promise you confidentiality of the information given.

Instructions

Please put a tick in the brackets in front of the most appropriate response. Where explanation is required, use the space provided.

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender Male ( ) Female ( )
2. Age
   - 20-30 years ( )
   - 31-41 years ( )
   - 42 years and above ( )
3. District:……
4. Division:……
5. Location:……..
6. Village:……
7. Occupation:……
8. Educational level
   - Primary ( )
   - Secondary ( )
   - Vocational education ( )
   - University ( )
   - Training College ( )
   - None ( )

9. Marital status

Married	( )
Single	( )
Divorced	( )
Separated	( )
Widowed	( )

SECTION B: LIVELIHOOD OF LOCAL COMMUNITY

10. What is your main source of livelihood?

Livestock keeping ( ) Farming ( ) Business ( )

11. What do you value most?

Animals ( ) Land ( )

12. Have you lost land to the oil drilling activities? Yes ( ) No ( )

If yes, explain the process

13. Were you expecting any compensation for the loss of land? Yes ( ) No ( )

If yes, what compensation did you expect?

……

……

14. How will your household manage to cope after losing your main source of livelihood?

Coping strategy	Tick
Education	
Reduce family expenditure	
Depend on relief food aid	
Seek casual labour	
Receive help from friends and relatives	
Agro-pastoralism	
Borrow money	

15. (a) Do you think you the exploration of oil in Lokichar Basin will better your living conditions?

Yes ( ) No ( ) I do not know ( )

(b) If Yes, in what ways do you think Oil exploration will better your living standards?

16. What benefits do you expect from Oil exploration in your area?

……

…….....

17. Are you satisfied with the dealings of the Oil Companies? Yes ( ) No ( )

18. How would you rate efforts of the Oil Companies so far in your area?

Very Good ( ) Good ( ) Average ( ) Below Average ( )

SECTION C: LOCAL COMMUNITY PARTICIPATION IN OIL EXPLORATION

19. Are you involved in the Oil exploration? Yes ( ) No ( )

20. What role can you play in the Oil exploration?

……

……

21. (a) Are you aware of activities of the extractive industries? Yes ( ) No ( )

(b) If yes, what are these activities?

……

……

22. (a) Do you have the capacity needed to contribute to the Oil exploration activities?

Yes ( ) No ( )

(b) If Yes or No, explain your answer

……

……

23. Are you aware of any policy regarding extractive industry? Yes ( ) No ( )

24. Do you know what goes on the oil camps in terms of oil-related activities?

Yes ( ) No ( )

25. How can you best participate in the management of the oil resource in Turkana?

……

……

26. On what areas should the community be trained on in your opinion?

Awareness on benefit-sharing ( )

Advocacy on environment protection ( )

Awareness creation on community participation ( )

Conflict management and resolution ( )

Technical skills on oil industry ( )

All the above ( )

27. Who can you as a community trust as a mediator for the community to advocate for your benefit?

Church ( ) National Government ( ) County Government NGOs ( )

MCAs ( )

28. Were you consulted in the establishment of the oil camps? Yes ( ) No ( )

29. (a) Do you think the discovery and exploitation of oil in Turkana will lead to development in Turkana County? Yes ( ) No ( )

(b) If Yes or No, explain your answer.

……

……

30. To what extent do you agree with the following statement by stating

1. True 2. Not true 3. I don't know

	3	2	1
The community should participate more in decision making regarding oil Co. operations			
There have been more land conflicts since the discovery oil in the area			
Oil discovery has changed the political environment of the area			
The community has benefited a lot from the presence of extractive industries			
There is need to train community mediators who can intervene between community and government			

SECTION D: CONTRIBUTION OF OIL EXPLORATION ON PEOPLE'S LIVELIHOOD

31. Who do you think will be the direct beneficiaries from the Oil exploration in Lokichar Basin?

……

……

……

32. How do you perceive the impact of discovery and exploitation of oil on your household livelihood?

Very negative	( )	Very positive	( )
Negative	( )	Indifferent	( )
Positive	( )		

Instructions

Besides each of the statements presented below, please indicate how much the extractive industry has impacted on the people's livelihood in Turkana County

Key:

2. Highly 2. Moderately 3. Low 4. Not affected 5. I don't know

33. How much has the extractive industry affected the livelihood of the people in Lokichar Basin in the following areas

	5	4	3	2	1
Employment creation					
Improved infrastructure and social amenities					
Provision of health services					
Income					
Education					

34. What activities should the extractive industry do to the community so as to bring about sustainable livelihood?

……

……

……

SECTION E: OBSTACLES FACED IN OIL EXPLORATION IN LOKICHAR BASIN

35. What potential threats do you perceive in the discovery of oil in Turkana County?

……

……

……

36. Do you think the operations of the extractive industry have effect on the environment? Yes ( ) No ( )

37. If Yes what measures do you suggest to be undertaken to mitigate these effects

Instructions

Besides each of the statements presented below, please indicate whether you strongly agree, agree, disagree or strongly disagree.

Key:

1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree

38. The following are the hindrances to proper governance of natural resources in Turkana County

	5	4	3	2	1
High levels of Corruption					
Negative ethnicity					
Gender inequalities					
Politics					
Low education levels					

Thanks you for your cooperation. God bless you abundantly

Appendix III: Questionnaire for Institutions (NGOs, CSOs, Religious Leaders, Business Community, MCAs and Turkana County Government Leaders)

Dear Sir/Madam

I am Areman L. Paul, a student at Moi University, Reg. No. SHRD/PHDD/04/15, undertaking a PhD in Development Studies. I am carrying out a research on "Natural Resource exploitation on People's Livelihood: A Study of Oil exploitation in Lokichar Basin, Turkana County, Kenya".

Any response or information given is solely for academic purposes. Kindly answer the questions provided. I promise you confidentiality of the information given.

Instructions

Please put a tick in the brackets in front of the most appropriate response. Where explanation is required, use the space provided.

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender Male ( ) Female ( )
2. Age
   - 20-30 years ( )
   - 31-41 years ( )
   - 42 years and above ( )
3. Name of Institution:…….
4. Position of Responsibility:……
5. District:…….
6. Division:……
7. Location:……
8. Educational level
   - Primary ( )
   - Secondary ( )
   - Vocational education ( )
   - University ( )
   - Training College ( )
   - None ( )
9. Marital status
   - Married ( )
   - Single ( )

Divorced ( )

Separated ( )

Widowed ( )

10. How long have you been in Turkana County?

5 years ( )

10 years ( )

More than 10 years ( )

SECTION B: LIVELIHOOD OF LOCAL COMMUNITY

11. (a) Are you aware of any local community expectations with regard to Oil exploration in Lokichar Basin?

Yes ( ) No ( )

(b) What are some of these expectations?

……

……

12. Do you think the expectations of the local community with regard to Oil exploration have an impact on their primary source of livelihood

Yes ( ) No ( )

13. How will Oil exploration affect the primary source of livelihood of the people of Lokichar Basin?

……

……

14. To what extent do you think the local community expectations have been met by the Oil Companies in Lokichar Basin?

Great extent ( ) Moderate extent ( ) Low extent ( ) Not sure ( )

15. (a) Are there any provisions made in your department in terms of managing local community expectations?

Yes ( ) No ( )

(b) If yes, what are these provisions?

……

16. Do you think the local community expects your assistance in any way?

Yes ( ) No ( )

17. Is your department actively involved in negotiations with extractive industries on behalf the local community due to loss of land for the oil-industry activities?

    Yes ( ) No ( )

    If yes, explain your answer

    ……

    ……

18. Are you satisfied with how the Extractive industries' CSR activities are being implemented in the Local community?

    Yes ( ) No ( )

    Give reasons for your answer

    ……

    ……

19. Are there any government or NGO or Church sponsored programmes already running in Lokichar Basin?

    Yes ( ) No ( )

20. What is the focus of these programmes mentioned above?

    ……

21. Have the mining Companies in the area impacted on the livelihood of the people in this area?

    Yes ( ) No ( )

22. What can be done to ensure that the local people in this area can benefit from the Oil exploration in their area?

    ……

    ……

23. Are you satisfied with the CSR activities of the extractive industry?

    Yes ( ) No ( )

24. What CSR activities can the extractive companies engage in for the benefit of the people in this area?

    ……

    ……

SECTION C: LOCAL COMMUNITY PARTICIPATION IN OIL EXPLORATION

25. Do you think the local community is involved in the Oil exploration?

Yes ( ) No ( )

26. How do you rate the involvement of the local community leadership in the projects of the oil companies in Turkana County?

Very Bad	( )
Bad	( )
Good	( )
Very Good	( )

Kindly explain your answer

……

……

27. Indicate the extent to which you agree with the following statements

1. High extent 2. Moderate extent 3. Low extent

	3	2	1
The community should participate more in decision making regarding oil Co. operations			
The community can benefit more if represented by elites and politicians			
The local community should be made aware on the benefit-sharing agreement			
Extractive companies should provide more education scholarships for the local community			
There is need to train community mediators who can intervene between community and government			

SECTION D: CONTRIBUTION OF OIL EXPLORATION ON PEOPLE'S LIVELIHOOD

28. Do you think that the discovery and exploitation of oil in Turkana will lead to sustainable livelihood among residents of Turkana County?

Yes ( ) No ( )

29. What benefits do you think the local residents of Turkana County are likely to enjoy from the extractive industries present in Turkana County?

……

……

30. (a) Is there cooperation between the GOK and the oil companies with the local residents?

Yes ( ) No ( )

(b) What then does the government and the oil companies need to foster cooperation with the local residents?

……

……

31. (a) Does Turkana County have a policy on extractive industry exploration?

Yes ( ) No ( ) I don't know ( )

(b)If Yes to what extent do you think the locals are aware of this policy?

Large extent ( ) Medium extent ( ) Low extent ( )

32. To what extent has Turkana County implemented the extractive industry policy?

Large extent ( ) Medium extent ( ) Low extent (

Instructions

Besides each of the statements presented below, please indicate how much the extractive industry has impacted on the people's livelihood in Turkana County

Key:

1. Highly 2. Moderately 3. Low 4. Not affected 5. I don't know

28. How much has the extractive industry affected the livelihood of the people in Turkana County in the following areas

	5	4	3	2	1
Employment creation					
Improved infrastructure and social amenities					
Provision of health services					
Income					
Education					

29.(a) Do you think the operations of the extractive industry in Turkana County have an effect on the environment?

Yes ( ) No ( ) I don't know ( )

(b) If Yes what steps need to be taken to ensure environment safety and protection?

……

……

39. What are the CSR activities of the extractive industries in Turkana County?

……

……

40. To what extent are you satisfied with the CSR activities of the extractive industries in Turkana County?

Large extent ( ) Medium extent ( ) Low extent ( )

41. What in your opinion needs to be done for the local residents of Turkana County to benefit from the oil resource in Turkana County?

County Government

……

……

Oil Company

……

……

Central Government

……

……

NGOs/CSOs

……

……

Locals

……

……

SECTION E: OBSTACLES FACED IN OIL EXPLORATION IN LOKICHAR BASIN

42. To what extent do you think Political patronage poses a challenge to harnessing of natural resources?

Very true ( ) True ( ) I don't think so ( )

43. In your opinion what is the greatest threat to use of Oil exploration to benefit all members of the local community?

……

……

Instructions

Besides each of the statements presented below, please indicate whether you strongly agree, agree, disagree or strongly disagree.

Key: 1. Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree

44. The following are the hindrances to proper governance of natural resources in Turkana County

	5	4	3	2	1
High levels of Corruption					
Negative ethnicity					
Gender inequalities					
Politics					
Low education levels					

45. Do you know how the oil company acquired the land for oil extraction?

Yes ( ) No ( )

46. Who gave the land to the Oil company?

47. (a) Have the local residents been compensated for loss of land?

Yes ( ) No ( ) I do not know ( )

(b) Were you part of the negotiation team?

Yes ( ) No ( )

48. How will your institution ensure that adequate compensation is given to the local residents?

……

……

49. Do you know of any disputes between the oil companies and the local community?

Yes ( ) No ( )

If so explain

……

……

50. How do you rate the following actors in addressing conflicts that arise as a result of the extractive industry in Turkana County?

	Very good	Good	Average	Bad	Worse
County government					
Local community initiatives (Elders, Chiefs)					
NGOs, CBOs and FBOs					

51. (a) Are there trained groups of the community who can intervene on behalf of the community on issues regarding extractive industries?

Yes ( ) No ( ) I don't know ( )

(c) If yes please name them

……

……

52. What mechanisms do you propose to address conflicts arising due to extractive industries in Turkana County?

……

……

53. How is the GOK managing the conflict between the oil companies and the local community?

……

……

54. (a) Are you aware of any production sharing agreements with the oil company?

Yes ( ) No ( ) I do not know ( )

(b) What is the content of the agreement?

……

……

Thank bless you abundantly.

Appendix IV: Interview Guide for Representatives of Government Ministries (Ministry of Mining, Ministry of Lands and Ministry of Environment)

Dear Sir/Madam

I am Areman L. Paul, a student at Moi University, Reg. No. SHRD/PHDD/04/15, undertaking a PhD in Development Studies. I am carrying out a research on "Natural Resource exploitation and People's Livelihood: A Study of Oil exploitation in Lokichar Basin, Turkana County, Kenya".

Any response or information given is solely for academic purposes. Kindly answer the questions provided. I promise you confidentiality of the information given.

Instructions

Please put a tick in the brackets in front of the most appropriate response. Where explanation is required, use the space provided.

1. Gender Male ( ) Female ( )
2. Department:……
3. Position in the Department…….
4. Educational level

   Primary ( )
   Secondary ( )
   Vocational education ( )
   University ( )
   Training College ( )
   None ( )

5. Are you aware of existence of any mineral resources in Turkana County?

   Yes ( ) No ( )

6. Where are these mineral resources found?

   ……

   ……

7. (a) Is there any law in Kenya regarding extractive industry (Oil exploration) at the moment?

   Yes ( ) No ( )

(b) If yes, what laws are guiding oil activities (drilling) in Kenya?

……

……

8. To what extent has the GOK implemented the extractive industry policy?

   Large extent ( ) Medium extent ( ) Low extent ( )

9. To what extent do you think the local people know the policy on extractive industry mineral exploration

   Large extent ( ) Medium extent ( ) Low extent ( )

10. What do you foresee to be some of the problems associated with discovery and exploitation of oil in Turkana County?

    ……

    ……

11. How is your department prepared to mitigate the negative effects of oil discovery in Turkana County?

    ……

    ……

12. Are you aware that oil is a depletable resource?

    Yes ( ) No ( )

    If yes, what measures are in place for sustainable natural resource management?

    ……

    ……

13. Do you think it is necessary to involve the local community in the management of the Oil found in this area?

    Yes ( ) No ( )

14. What mechanisms exist for the participation of the local community in the management of the oil resource in Turkana County?

    ……

    ……

15. How was the Land given to the oil company acquired from the local residents?

    ……

    ……

16. Were the local residents in the area consulted in handing over the land to the extractive industries?

    Yes ( ) No ( )

Instructions

Besides each of the statements presented below, please indicate as directed.

Key: 1. High 2. Low 3. Medium 4. I do not know

17. The following are the implications of discovery and exploitation of oil in Turkana County

	4	3	2	1
Employment creation				
Improved infrastructure and social amenities				
Availability of business avenues				
Foreign exchange				
Loss of means of Livelihood				
Levels of poverty				
Corruption				
Cultural Crisis				
Negative Ethnicity				
Gender inequalities				
Population Increase				
Environmental degradation				
Conflicts/wars				

18. Have the local residents been compensated for loss of land?

Yes ( ) No ( ) I do not know ( )

Kindly explain your answer

……

……

19. How are the local residents being educated on the activities connected to oil drilling?

Through their local representatives ( )

Seminars organized by the oil companies ( )

Peer education ( )

Nothing is being done at all ( )

Others (Specify)……

……..……

20. (a) Are you aware of any Production sharing agreements signed with the oil companies?

Yes ( ) No ( )

(b) Who are the parties for these agreements?

……

……..……

21. (a) Is the local community featured in the agreements?

Yes ( ) No ( ) I do not now ( )

(b) How will the community benefit in the share of the oil revenue?

……

……

22. What stage is the oil company at as at now?

……

……

……

23. What method of mining does the oil company intend to use?

……

……

24. What can be done for the oil resource in Turkana County to be a blessing?

County Government

……

……

Central Government

……

……

NGOs/CSOs

……

……

Locals

……

……

……

Thank you for your cooperation. God bless you abundantly

Appendix V: Interview Guide for Representatives of Oil Company

Dear Sir/Madam

I am Areman L. Paul, a student at Moi University, Reg. No. SHRD/PHDD/04/15, undertaking a PhD in Development Studies. I am carrying out a research on "Natural Resource exploitation and People's Livelihood: A Study of Oil exploitation in Lokichar Basin, Turkana County, Kenya".

Any response or information given is solely for academic purposes. Kindly answer the questions provided. I promise you confidentiality of the information given.

Instructions

Please put a tick in the brackets in front of the most appropriate response. Where explanation is required, use the space provided.

1. Gender Male ( ) Female ( )
2. Age

   20-30 years ( )
   31-41 years ( )
   42 years and above ( )
3. Name of the Company……..
4. Position in the Company……..
5. Site:……
6. Educational level

   Primary ( )
   Secondary ( )
   Vocational education ( )
   University ( )
   Training College ( )
   None ( )
7. How many communities are affected by the oil drilling activities

   ……

   ……
8. How many blocks does the oil Company own?

   ……

   ……

9. Where are these blocks found in the County?

   ……

   ……

10. What stage are you in at the moment?

    ……

    ……

11. What method of mining do you plan to use?

    ……

    ……

12. How did the oil company acquire the land?

    ……

    ……

13. Did you pay for it?

    Yes ( ) No ( )

14. Who did you pay?.....

15. Are you operating under any policy?

    Yes ( ) No ( )

16. What is this policy?

    ……

    ……

17. Are you aware of the local community expectations with regard to Oil exploration in Lokichar Basin?

    Yes ( ) No ( )

18. What efforts have you been able to carry out in order to address the local community expectations?

    ……

    ……

19. Do you think the local community is satisfied with what you have already for them?

    Yes ( ) No ( ) Not sure ( )

20. What else do you think you need to do manage the local community expectations?

    ……

    ……

21. To What extent do you think the local community is aware of this policy?

    Great Extent ( ) Medium extent ( ) Low extent ( )

22. Do you think it is necessary for the local community to participate in your operations?

    Yes ( ) No ( )

23. What efforts are you taking to ensure that the local community is fully aware of your operations?

    ……

    ……

24. (a) Have you signed any Production sharing agreements?

    Yes ( ) No (

    (b) With whom?.....

    (c) What is the content of the Production sharing agreements?

    ……

    ……

    ……

25. Does the local community feature in the production agreement?

    Yes ( ) No ( )

26. What is the status of the local community in the benefit-sharing agreement?

    ……

    ……

27. How did your oil company win the tender for extraction of oil in Turkana County?

    ……

    ……

Instructions

Besides each of the statements presented below, please indicate how much the extractive industry has impacted on the people's livelihood in Turkana County

Key:

1. Highly 2. Moderately 3. Low 4. Not affected 5. I don't know

28. How much has the extractive industry affected the livelihood of the people in Turkana County in the following areas

	5	4	3	2	1
Employment creation					
Improved infrastructure and social amenities					
Provision of health services					
Income					
Education					

29. Is there any comprehensive corporate social responsibility package put in place for the benefit of local residents?

Yes ( ) No ( )

If yes, please explain your answer

……

……

30. How will the local residents get information on beneficiary packages?

……

……

31. (a) Do you think that the local residents may reap the benefits of the oil revenue?

Yes ( ) No ( )

(b) If yes, in what ways will the local residents of Turkana County benefit from the oil revenue?

(c) How will you ensure that the local residents get the benefits of the oil revenue?

……

……

……

32. What is the relationship between the company executives and community leaders?

Very cordial ( )

Cordial ( )

Uncooperative ( )

Not known ( )

Hostile ( )

33. What has been the local residents' reception of the oil companies operating around Turkana County?

Very warm ( )

Warm ( )

Indifferent ( )

34. To what extent do you agree with the following statements

Strongly Agree 2.Agree 3. Neutral 4. Disagree 5. Strongly Disagree

	5	4	3	2	1
There has been an increase of disputes between the extractive industries and local communities					
Politicians interfere with the operations of the extractive industries					
The local community should participate more in the operations of the extractive industries					
Operations of the extractive industries have adverse effects on the environment					
Local community leaders should be empowered to represent their communities well					
Oil discovery will lead to sustainable livelihood among the Turkana people					

35. What is the role of the local community in your activities?

……

……

36. How will the local residents know their role in your activities?

……

……

37. What are your plans for the local community?

……

……

38. What challenges do you face in your operations?

……

……

39. What in your opinion do you think needs to be done to ensure that Oil discovery in Turkana County leads to sustainable livelihoods?

    ……

    ……

Thank you for your cooperation. God bless you abundantly.

Appendix VI: Focus Group Discussion Guide

1. How will exploitation of oil in Turkana affect the means of livelihoods of Turkana pastoralists?
2. What capacity do the local residents of Turkana County have to manage the oil resource in Turkana County?
3. What is the extent to which the natural resource wealth (Oil) in Turkana County likely to improve the quality of life of the Turkana people?
4. What are the causes of disputes between the local Turkana residents and the Tullow Oil Company?
5. What challenges are faced in the management of the oil resource in Turkana County?
6. What agreements have been made with the oil company in Turkana County?
7. What should be done to ensure that activities of the extractive industries lead to sustainable livelihood among the people of Turkana County?

Tonny Adome, One of the Research Assistants with a Herdsman