

**INFLUENCE OF OIL DRILLING ON THE SOCIOECONOMIC  
WELLBEING OF TURKANA COMMUNITY IN LOKICHAR LOCATION,  
TURKANA COUNTY, KENYA**

**Francis Ekaale Ekales**

A Thesis Submitted in Partial Fulfillment of the Requirements for the Award of the Degree of Master of Science in Environment and Natural Resource Management in the Department of Environment and Natural Resources Management, School of Science and Technology of Africa Nazarene University

July, 2019

**DECLARATION AND RECOMMENDATION**

I declare that this document and the research it describes are my original work and that they have not been presented in any other university for academic work

---

**Francis Ekaale Ekales****16J01DMEV004**

---

**Date****Recommendation**

This Thesis has been submitted for examination with our approval as the university supervisors.

---

**Dr. Mark Ndunda Mutinda**

+

---

**Date**

---

**Dr. Justus Muteti Kavoi**

---

**Date**

**Africa Nazarene University  
Nairobi, Kenya**

## ABSTRACT

Oil drilling is supposed to create economic development and improvement of living standards to the people living around the mine areas through job creation, provision of education and equal sharing of the benefits from the resource. Currently, poverty levels among the locals have not improved and the effects of environmental pollution from oil firms are clearly evident, influencing the wellbeing of the community. This study sought to examine the influence of oil drilling on the wellbeing of the Turkana community in Lokichar Location Turkana County, Kenya. The objectives were to; assess the influence of oil firm's Corporate Social Responsibility (CSR), environmental pollution and land acquisition on the wellbeing of the Turkana community in Lokichar Location, Turkana County. The *ex post facto* research design was used. A Stratified random sample of 384 households was selected and interviewed using a pretested structured questionnaire from two Sub Locations of Lokichar and Kapese located at a radius of five kilometers from Ngamia 1, Etuko, Twiga and Ekales Tullow oil wells. The sample was allocated proportionally within the two sub locations, 177 households in Lokichar and 207 in Kapese Sub location. Key Informants Interviews (KII) were conducted on purposively selected from key employees of Tullow oil, local community leaders, and Chiefs. Two Focus Group Discussions (FGD) targeting women living around the mine zones in the two sub locations were conducted. The resulting data from the KII and FGD were used to triangulate the data from the household survey. Descriptive statistics (frequency distributions, means and standard deviations) and inferential statistics (regression analysis and t-test) were used to analyze the data at 95 percent level of confidence. The socioeconomic wellbeing of the households found around the oil fields in Lokichar were found to be of low level (3.0 to 4.99) with a mean of 4.84 on a scale of 1 to 10. Statistical significant negative influences were found to exist between the socio-economic wellbeing of the households and involuntary land acquisition ( $\beta = -.567, p = .001$ ) and environmental pollution ( $\beta = -.359, p = .017$ ). Corporate social responsibility had no significant influence on wellbeing of the people living around the oilfields. The study concluded that the oil firms need to increase their corporate social responsibility, enhance pollution control measures and compensate the local people for their acquired land.

## TABLE OF CONTENTS

<b>ABSTRACT</b> -----	<b>iii</b>
<b>TABLE OF CONTENTS</b> -----	<b>iv</b>
<b>LIST OF TABLES</b> -----	<b>ix</b>
<b>LIST OF FIGURES</b> -----	<b>x</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS</b> -----	<b>xi</b>
<b>DEFINITION OF TERMS</b> -----	<b>xii</b>
<b>CHAPTER ONE</b> -----	<b>1</b>
<b>INTRODUCTION</b> -----	<b>1</b>
1.1 Background of the Study -----	1
1.2 Statement of the Problem-----	3
1.3 Purpose of the Study -----	4
1.4 Research Objectives-----	4
1.4.1 Specific Objectives-----	4
1.5 Research Questions-----	5
1.6 Significance of the Study-----	5
1.7 Scope of the Study-----	6
1.8 Limitations of the Study -----	6
1.9 Theoretical Framework -----	6
1.9.1 The Resource Curse Theory -----	6
The “Dutch Disease” -----	10
1.9.3 Critical Review of the Theories -----	12
1.10 Conceptual Framework-----	15

<b>CHAPTER TWO</b>	<b>17</b>
<b>LITERATURE REVIEW</b>	<b>17</b>
2.1 Introduction	17
2.2 Subjective Wellbeing	17
2.2.1 Measurement of Wellbeing	17
2.2.3 Wellbeing among the Turkana	22
2.3 Oil Mining in Turkana	23
2.3.1 Oil Discovery in Turkana County, Kenya	23
2.3.2 Case Study of the Nigerian Resource Infamy	25
2.4 Corporate Social Responsibility	27
2.4.2 Types of Corporate Social Responsibilities CSR	29
2.4.3 Influence of CSR on Wellbeing	31
2.4.4 Corporate Social Responsibility in Turkana Oil	31
2.5 Environmental Pollution of Oil drilling	32
2.5.1 Types of Environmental Pollution	37
2.5.2 Influence of Environmental Pollution on Wellbeing of Turkana	42
2.5.3 Environmental Pollution among the Turkana	43
2.6 Land	44
2.6.1 Land Tenure	44
2.6.2 Land Acquisition and Influence on Community Wellbeing	46
2.6.3 Land Production	47
2.7 Summary of Literature Review	48
2.8 Research Gap	48

<b>CHAPTER THREE</b>	<b>50</b>
<b>RESEARCH METHODOLOGY</b>	<b>50</b>
3.0 Introduction	50
3.1 Research Design	50
3.2 Study Area	50
3.3 Study Population	52
3.4 Sampling Procedures and Sample Size	52
3.5 Description of Research Instruments	53
3.5.1 Household Survey	54
3.5.2 Focus Group Discussions	55
3.5.3 Key Informant Interviews	55
3.6 Reliability and Validity of Research Instruments	55
3.6.1 Validity of Research Instruments	56
3.6.2 Reliability of Research Instruments	56
3.7 Data Collection Procedure	57
3.8 Ethical and Legal Considerations	57
3.9 Operationalization of Study Variables	58
<b>CHAPTER FOUR</b>	<b>60</b>
<b>RESULTS AND FINDINGS</b>	<b>60</b>
4.1 Introduction	60
4.2 Demographic Characteristics of Households in Lokichar Location	60
4.2.1 Sex of Household Heads	60
4.2.2 Marital Status of the Household Heads	61
4.2.3 Household Numbers	61
4.2.4 Highest Education Level Attained by the Respondents	62

4.3 Household Socioeconomic Wellbeing in Lokichar Location -----	63
4.4 Influence of Corporate Social Responsibility on Household Socioeconomic Wellbeing-----	65
4.3.1 Corporate Social Responsibility-----	65
4.3.2 Influence of Corporate Social Responsibility on the Socioeconomic Wellbeing of the Community-----	67
4.4 Environmental Pollution and Wellbeing of the Community -----	69
4.4.1 Environmental Pollution -----	69
4.4.2 Influence of Environmental Pollution on the Wellbeing of the Households -----	70
4.5 Land Acquisition and Socioeconomic Wellbeing-----	72
4.5.1 Land Acquisition for Oil Activities-----	72
4.5.2 Influence of Involuntary Land Acquisition on the Wellbeing of the Households-----	73
<b>CHAPTER FIVE -----</b>	<b>75</b>
<b>DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS-----</b>	<b>75</b>
5.1 Introduction-----	75
5.2 Discussions -----	75
5.2.1 Characteristics of the Households Around the Oil fields in Lokichar Location -----	75
5.2.2 Effects of Corporate Social Responsibility Activities by the Oil Companies -----	76
5.2.3 Influence of Environmental Pollution on the Socioeconomic Wellbeing of the Households in Lokichar Location -----	76

5.2.4 Influence of Involuntary Land Acquisition on the Socioeconomic Wellbeing of the Households in Lokichar Location -----	77
5.3 Summary of Key Findings -----	77
5.4 Conclusions-----	78
5.5. Recommendations -----	79
5.3. Further Areas of Study -----	79
<b>REFERENCES -----</b>	<b>80</b>
<b>APPENDICES -----</b>	<b>84</b>
APPENDIX A: HOUSEHOLD QUESTIONNAIRE -----	84
APPENDIX B: FOCUS GROUP DISCUSSIONS GUIDE-----	89
APPENDIX C: QUESTIONNAIRE FOR EMPLOYEES (Key Informant Interview)-----	90
APPENDIX D: TULLOW COMPLETE CSR PROJECTS BY 2015-----	92
APPENDIX E: SOCIOECONOMIC WELLBEING OF HOUSEHOLDS IN LOKICHAR LOCATION -----	94
APPENDIX F: LETTER FROM THE UNIVERSITY -----	95
APPENDIX G: LETTER FROM NACOSTI -----	96
APPENDIX H: PERMIT FROM NACOSTI -----	97

## LIST OF TABLES

Table 3.1 Sample Household Distribution-----	53
Table 3.2: Summary of Data Analysis -----	59
Table 4.1: Sex of the Household Heads in the Sub-location-----	60
Table 4.2: Marital Status of the Household Heads -----	61
Table 4.3: Household Numbers -----	62
Table 4.4: Highest Level of Formal Education Attained by the Household Head ----	62
Table 4.7: Chi-square test for the Household’s Socioeconomic Wellbeing -----	65
Table 4.8: Activities Undertaken by the Oil firm as Corporate Social Responsibility	66
Table 4.9: Regression Model Summary for Corporate Social Responsibility and Socioeconomic Wellbeing of Households in Lokichar Division-----	68
Table 4.10 Statistical Significance of the Regression Model using the F Test -----	68
Table 4.11: Regression Coefficients for the Bivariate Relationship between Corporate Social Responsibility and Wellbeing of the Households -----	69
Table 4.12: Index of Environmental Pollution Arising from Oil firm Activities -----	70
Table 4.13: Regression Model between Environmental Pollution and Wellbeing of the Households-----	70
Table 4.14: Statistical Significance of the Regression Model using the F Test -----	71
Table 4.15: Regression Coefficients for Environmental Pollution and Wellbeing of the Households-----	71
Table 4.16: Index for Involuntary Land Acquisition-----	72
Table 4.17: Regression Model Summary for the Involuntary Land Acquisition -----	73
Table 4.18: Regression for the Model between Involuntary Land Acquisition and Socioeconomic Wellbeing of Households in Lokichar Location -----	74
Table 4.19: Regression Coefficients for involuntary Land Acquisition-----	74

**LIST OF FIGURES**

Figure 1.1 Conceptual framework depicting the relationship between oil drilling and household wellbeing ..... 16

Figure 3.1: Oil discoveries in Lokichar Basin, Turkana County .....51

**LIST OF ABBREVIATIONS AND ACRONYMS**

<b>AFRICOG</b>	Africa Centre for Open Governance
<b>ASAL</b>	Arid and Semi-Arid Lands
<b>BCSD</b>	Business Council for Sustainable Development
<b>CBO</b>	Community Based Organization
<b>CIC</b>	Commission for the Implementation of the Constitution
<b>CICS</b>	Centre for International Cooperation and Security
<b>CSR</b>	Corporate Social Responsibility
<b>DoL</b>	Diocese of Lodwar
<b>DRM</b>	Day Reconstruction Method
<b>EPCM</b>	Engineering Procurement and Construction Management
<b>KCSPOG</b>	Kenya Civil Society Platform on Oil & Gas
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>MOSOP</b>	Movement for the Survival of the Ogoni People
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NPN</b>	Nigerian Petroleum News
<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>WBCE</b>	World Industry Council for the Environment (WBCE)
<b>WCS</b>	Wildlife Conservation Society

## DEFINITION OF TERMS

**Corporate Social Responsibility:** CSR is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders voluntarily as they exceed the obligatory requirements in order to address the needs of the society (Prieto, 2006). In this study, the term CSR was used to refer to all the activities that oil firms undertake within the locality (Lokichar) of their operations to compensate for the existence of those firms and how it influences the wellbeing of the local community.

**Environmental Pollution:** Pollution is the introduction of contaminants into the natural environment that causes adverse change (Constantaras, 2014). Pollution can take the form of chemical substances or energy, such as noise, heat or light. Pollutants, the components of pollution, can be either foreign substances/energies or naturally occurring contaminants. In this study, environmental pollution entails all the negative impacts of oil drilling to the environment of the local community and how it influences the wellbeing of the same community.

**Influence:** It refers to the ability to cause desirable and measurable actions and outcomes (Solis, 2010). In this study, this definition will be adopted to determine the relationship between the independent and dependent variables. In this study, the term influence entails the perceptions of the local community on the various impacts of oil drilling on their wellbeing.

**Land Acquisition:** Refers to the process by which the state or a private developer acquires private land for the purposes of industrialization, development of

infrastructural facilities or urbanization of the land and provides compensation to the affected land owners and their rehabilitation and resettlement. In this study, land acquisition stands for the ability of oil drilling firms to access land within the local community and the various restrictions that come as a result of it.

**Location:** According to this study, Location refers to a type of administrative region in Kenya. They are a fourth level subdivision below Provinces, Districts and Divisions. Location in this study stands for Lokichar which is the study area of this research.

**Subjective Wellbeing:** Subjective Wellbeing can be defined as the state of being comfortable, healthy or happy. It is a condition of an individual or a group. A high level of wellbeing means in some sense the individual or group's condition is positive (Diener, 2000). In this study, subjective wellbeing stands for how the Turkana people perceive comfort or what they understand as happiness.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Mining activities usually have the objective of extracting minerals or oil deposits. These activities are undertaken for social and economic progression of a nation with such resources (Karl, 2004). Oil discoveries have been understood to have short-term benefits which are mostly experienced at the initial stages of export production. These are in the form of employment opportunities available, infrastructural development and rapid per capita growth resulting from oil revenues (Karl, 2004). In addition, such oil drilling activities can bring business opportunities, improved road network, properly equipped schools, and health clinics to remote and previously marginalized areas. The benefits can at times be unevenly distributed and for some they may be poorly compensated for the loss of existing livelihoods and the damage to their environment and culture (Lane, Salk & Lyles, 2001). If communities feel they are being unfairly treated or inadequately compensated, oil drilling can lead to tension and sometimes to violent conflict (Burns, 2004).

Ideally, oil drilling activities are expected to contribute to the economic and livelihood development of the host communities. Locally, livelihood development is about meeting locally defined social and economic goals over the long term. The drilling activities have to add to the existing financial, human and information resources. Enhancing community values presents a particular challenge, given the high expectations that arise and the social change brought about by drilling and the potential influx of outsiders (Crosby, 2009)

The most notable influence of oil drilling touches on the well-being of the communities living around the mine zones. It mostly occurs in the form of displacement, land acquisition and access restrictions, health issues and livelihoods disruption. Community members involved tend to experience abundant subjective well-being when they feel many pleasant and few unpleasant emotions, when they are engaged in pleasant activities, when they experience many pleasures and few pains and when they are satisfied with their lives. Oil drilling has a number of effects both socially and economically which influences the wellbeing of the surrounding community. In this regard, the oil companies have a responsibility of creating conducive infrastructure that ensures safe health to the community members in a bid to ensure that it does not affect the communities' way of living (Gabriel, 2007).

In an attempt to minimize the negative impacts, oil companies adopt a multifaceted approach which include; compliance with statutory requirements, agreements on local content concerning employment, contracts and scholarships as well as building road networks, schools, health and sanitation facilities (Burke & Logsdon, 1996). Apart from the statutory requirements, majority of these mitigation measures are categorised as Corporate Social Responsibility (CSR) by most oil companies. Corporate social responsibility often abbreviated as "CSR," is a corporation's initiative to assess and take responsibility for the company's effects on social wellbeing. The term generally applies to efforts that go beyond what may be required by regulators (Burke & Logsdon, 1996). In Lokichar Location where Tullow oil engages in oil drilling, the effects of oil activities like environmental pollution, land acquisition by the oil firms and CSR are already being felt by the residents some of which have influenced the

wellbeing of the local community but no study has been undertaken to establish the perceptions of the local community on the on-going oil mining within their locality.

This study therefore sought to assess the influence of oil drilling activities on host communities' subjective wellbeing. It also sought to assess the perceptions of the local community towards the various attempts by the oil drilling companies to compensate for the alleged damage on their surroundings. It will use the case study of Tullow Oil Company activities in Lokichar Location Turkana County, Kenya. The focus is on subjective wellbeing because Lokichar Location, Turkana County is an ASAL with a prolonged history of poverty and marginalization (KCSPOG, 2014).

## **1.2 Statement of the Problem**

Oil discovery and subsequent drilling in the Lokichar basin was meant to benefit the local communities in that the proceeds were meant to provide incomes and improvement of the community livelihoods. Currently, the positive and negative impacts arising from the harvesting of the oil have occurred. The positive impacts are CSR (Education, Health provision, Water projects, Community Empowerment, employment opportunities) while the negative ones include environmental pollution, conflicts and disruption of livelihoods through land acquisition by the oil firms. These impacts can possibly influence the wellbeing of the local communities. Landlessness, expropriation of land removes the main foundation upon which people's productive systems, commercial activities, and livelihoods are constructed. This is the principal form of de-capitalization and pauperization of displaced people, as they lose both natural and human-made capital. This however interferes with the social setup of these communities as it requires them to move out of these regions. Past research on oil drilling has mainly focused on the environmental impacts of oil drilling but few

have addressed the influence of the following factors: CSR (Education, Health provision, Water projects, Community Empowerment, employment opportunities) Pollution and land acquisition by the oil firms on the wellbeing of the people, which was the focus of this study.

### **1.3 Purpose of the Study**

The study sought to assess how oil drilling influences the wellbeing of the local community in Lokichar Location, Turkana County.

### **1.4 Research Objectives**

This study was designed to assess the influence of oil drilling on the wellbeing of the local community in Lokichar Location, Turkana County.

#### **1.4.1 Specific Objectives**

The specific objectives of the study are:

- (i) To assess the influence of oil firm's Corporate Social Responsibility (education, health provision, water projects, community empowerment, employment opportunities) on the socioeconomic wellbeing of households around the oil fields in Lokichar location.
- (ii) To determine the influence of environmental pollution from oil firms activities on the socioeconomic wellbeing of the households around the oilfields in Lokichar location.
- (iii) To analyze the influence of land acquisition by oil firms on the socioeconomic wellbeing of the households around the oilfields in Lokichar location.

### **1.5 Research Questions**

- (i) How does oil firm's CSR affect the wellbeing of the local community in Lokichar Location?
- (ii) How does environmental pollution from oil firms influence the wellbeing of the local community in Lokichar Location?
- (iii) How does land acquisition by oil firms influence the wellbeing of the local community in Lokichar Location?

### **1.6 Significance of the Study**

The findings from this study provide first-hand information on how oil drilling activities influence the wellbeing of the local community in Lokichar Location. It provides information to the Government, drilling companies and all the other stakeholders in the oil extraction sector including the community leaders on how better they can manage the extraction of oil to the benefit of the drilling company, government and the community at large. This hopefully reduces conflicts which may arise due to one party feeling oppressed. Secondly, this study informs the relevant stakeholders on how they negatively impact livelihoods of the community living around the drilling zones; this affects the wellbeing of the local community. This will ensure the stakeholders put proper mechanisms to address the problems caused by oil drilling to the host community thus satisfaction of all parties. In addition, the findings informs the government to formulate laws and policies which ensure that drilling companies extract oil sustainably in respect to the wellbeing of the community around the drilling zones. Furthermore, this research informs the drilling companies whether their corporate social responsibility strategy is working to the satisfaction of the host community and provides the drilling companies with workable recommendations to improve their CSR strategy. Lastly, by adopting the findings of this research, the leaders' fraternity will have strong negotiation

powers to ensure that the interest of their people is safeguarded and their ancestral land protected.

### **1.7 Scope of the Study**

The study was limited to oil drilling activities in Lokichar Location, Turkana County, Kenya. The study contributes to a gap in the body of knowledge first by providing relevant data on the effects of ongoing oil drilling in South Lokichar basin in Turkana County where it focused on. Secondly, the findings of this study will help policy makers and decision-making organs to target the right interventions in harnessing maximum benefits from oil drilling while minimizing the negative impacts on the wellbeing of the local community. Lastly, the study shall be a resource document for researchers and academic institutions which will use the knowledge gaps proposed to provide more insights on the proposed area of study.

### **1.8 Limitations of the Study**

According to the Turkana culture, women are not allowed to discuss community matters. They are confined to housekeeping issues only. To get the perceptions of the women around the mine zones, the researcher targeted the women at the Focus Group Discussion to contribute to the study.

### **1.9 Theoretical Framework**

Two theories were used to define this study. The study utilized the resource curse theory and 'the Dutch Disease'.

#### **1.9.1 The Resource Curse Theory**

The resource curse theory is a theory in economics which, simply put, suggests that nations which have rich, yet finite, natural resources may fail to develop in other

sectors, ultimately bringing about financial problems (Patey, 2014). Several factors come into play in the resource curse theory. The first is fairly obvious. If a country has a large supply of a natural resource like timber, the temptation is to sink all energy and resources into development of the timber industry, at the cost of other industries (Patey, 2014). This causes a series of chain reactions which can impede or even stall economic development. This is exactly what is exhibited by the local community in Lokichar Location. Since the oil drilling kicked off, the populations in the area of study have shifted their attention from other factors of development and livelihood like pastoralism and focused solely on oil. Students are dropping out of school to get employment in the oil sector at the expense of their educational future. In addition, the resource curse theory is exhibited by the fact that the local community in Lokichar around the oil mining zones are still poor and have so far not benefited from the presence of oil in their area.

The global drive towards modernity has been largely sustained by the exploitation of natural resources: hydrocarbons, solid minerals, forest reserves (e.g timber) among others. Modernization, in this sense, becomes the generation and utilization of both natural and technological resources to change the quality of a locality and the human lives within it (Bayode, 2011). Oil and gas, for example, has facilitated industrial revolutions in many countries like Norway but the improvement of human capital from the revenue, notably in Africa, remains a conundrum. The continent, has become infamous for this puzzle popularly dubbed the “resource curse” (Auty, 2001; Sachs, 1995; Ross, 1999); a phenomenon characterized by the “paradox of plenty”, to borrow (Karl, 1997) coinage.

Existing evidence shows that only one natural resource-rich country in the Africa-Botswana has succeeded in becoming an upper middle-income country using its natural resources (Zerihun, 2014) in contrast to countries like Nigeria and Angola. The “natural resource curse” phenomenon is where natural resource endowed countries experience worse economic and political outcomes than countries with no natural resource endowment (Siegle, 2008; Zerihun, 2014) has been at the forefront of both national and international debates on Kenya’s emerging extractives sector. Back in the 1950s, at the dawn of natural resource discoveries, many development economists believed that resource abundance was the key to the growth of “backward states” (Ross, 1999). A few scholars argued otherwise, that primary exporters would suffer from market volatility and the decline among other factors would increase the gap between industrialized countries and developing ones, despite the resource abundance. (Collier, 2006) has effectively pointed out, that an ideal situation is one where resources become a source of wealth for all, with its revenues a significant source for attaining the major thrust needed for economic growth and development (Collier, 2007).

Why then, has the promise of the good life eluded many in resource wealthy regions of Africa? The answer to the question is that issues such as the Dutch disease, rent seeking, weak regulatory institutions, greed and corruption is the reason why resource wealthy nations fail to benefit. (Ross, 1999; Collier, 2006; Barbier, 2005) argue that resource revenue and corruption go together. This is because rent seeking, through collection of revenues, fosters an environment where investors can easily pay off a few key officials rather than offer more meaningful development projects for the majority. Oil rich nations like Angola, Nigeria, Sudan, and Venezuela, and diamond-

rich countries like Sierra Leone, Liberia, and Congo, are some examples of some countries in the world struggling with the rent-seeking dilemma. A comprehensive study by Sachs (1995) in his book entitled *Natural Resource Abundance and Economic Growth*, which examined the impact of mineral resources on the growth of GDP in ninety-seven countries over a nineteen year period found abnormally slow rates of economic growth for countries with high ratio of natural resource exports (Ross, 1999).

Here, (Rodrik, 1999; Pritchett, 2000) argument about the importance of institutional quality for long-term economic growth becomes pertinent. They argue that countries where government institutions lack the ability to exercise control multinational companies, leave their citizens at the mercy of unequal power relations. (Sala-i-Martin, Xavier & Arvind Subramanian, 2003) takes this further to argue that the quandary, does not lie with the natural resources in themselves but that the failure, arises from the quality of institutions and public policies that result in low economic development (Zerihun, 2014). For example, countries like Norway, Malaysia and within Africa, Botswana have shown common traits integral for economic growth and development (Ross, 1999). Second, the prices of natural resources are volatile, making repayment of loans difficult. What this assertion suggests therefore, is that there might be common denominators that mark success and failure in the industry.

The unpredictability of commodity prices like oil, solid minerals and even agricultural produce, also creates a disadvantage whereby countries with weak financial systems, easily fall prey to market oscillation as evidenced in the current global oil glut. In a situation where a country is dependent on a singular commodity, this can cause untold

hardships for the people. Some scholars have termed this primary commodity dependence as the Dutch disease; A situation where a particular sector or resource stifles the growth of other resources. Thus, a negative link is said to exist between natural resource capital and human capital investment (Birdsall, 2000).

Kenya's Civil Society Platform on Oil and Gas (KCSPOG, 2014), among other notable scholars and experts on the subject under review, have argued that the current status of Kenya's oil and gas development, is one that requires a "conscious of the need for the Government of Kenya, Parliament, oil companies and civil society to work together in developing the appropriate policies, legal and institutional frameworks for the efficient and transparent management of the country's oil and gas resources" (KCSPOG, 2014)

In the next section, the researcher examines case study arguments of the environment and socio- economic impacts of oil drilling and production elsewhere with the aim of drawing theoretical and conceptual ideas for the Lokichar Location.

### **The "Dutch Disease"**

This refers to a situation where the economy of a region or country becomes deeply dependent on one natural resource exportation at the expense of other economic activities. Such a situation makes it impractical to diversify the economy due to high foreign exchange earned from the 'natural resource boom' that renders the rest uncompetitive (Omoredede, 2014). In such instances, people become attracted to the 'new' natural resource since it has high returns and abandon their previous livelihood sources. Approximately six decades ago in Nigeria, agriculture used to be the 'backbone' of the economy but with the emergence of the oil industry, it took few years for the oil to overtake agriculture due to high returns from the oil (Apata, 2010).

The worst happens when the market price of such commodity drops far below manageable levels and given that ‘natural resource boom’ makes other sectors of the economy to shrink, the effects are detrimental compared to a situation if the ‘boom’ had never occurred (Kim Younkyoo, 2003). In such instances, many businesses and sources of livelihood collapse as everybody scrambles for the single commodity that is profitable.

Just like the ‘resource curse’, the “Dutch disease” has also been prevalent among oil producing countries and has greatly affected the livelihood of not only the local communities inhabiting areas where the oil extraction takes place but the nations at large. Looking at Nigeria, it is argued that oil accounts for over 90% of total export value and approximately 80% of all the revenue collected by the government. In addition, the oil sector has incredibly contributed to the national economy from a mere 0.1% in 1959 to a stunning 87% in 1976 (CBN, 2000 cited by Omorede, 2014). Similar situation has been observed in Sudan. While the average growth rate of other export materials stood at averagely 18.6%, oil export was speedily expanding at an enormous rate of 32% between the years 2001 and 2005. The growth continued and by 2010, statistics show that oil accounted for over 90% Sudan’s export (Pantuliano, 2010). This led to over-reliance on oil for economic development which affected other sources of livelihood including pastoralism as people preferred to work in oil fields since they could earn more compared to their traditional livelihood strategies (Ibid).

### 1.9.3 Critical Review of the Theories

Ericsson (2008) in his argument on influence of many exploration projects to social development of marginalized communities stated that exploration projects has brought negative social impact on marginalized communities. He argued that exploration projects often changes the balance of power within the marginalized communities and that this has exacerbated by exploration companies being unaware of or choosing to ignore traditional decision-making bodies and negotiating with individuals who do not have the trust or support of their own community. He claimed that most exploration companies have been over decades using „divide and rule“ tactics, which have always seriously undermined the social cohesion of indigenous marginalized communities and other communities as well. In addition, Conflict in and around exploration areas usually stems from poor governance and lack of respect for the marginalized communities based in such areas. However, other scholars such as Hussai, (2010) disagreed with the view by the Erickson (2008) and claimed the positive impacts of exploration projects on social development of marginalized groups. He argued that, exploration results into migration of people into a mine area. People will settle around these areas and get employed. The social conflicts brought as result of lack of money are eradicated and this brings about positive social co-existence among the marginalized communities cohabiting together

Scholars such as Gulati (2003) have argued that exploration projects causes economic hardship by polluting and damaging environment for instance, or by appropriating grazing land for the marginalized communities who are actually dependent on scarce vegetation for their livestock. Dean and Brown (2004) further claimed that exploration projects results in displacement of settled communities. As a result,

Communities may lose their land, and thus their livelihoods, disrupting also community institutions and power relations. This affects the communities in terms of economic empowerment as the spirit of development among members of the displaced groups go down. Contrary to this, Garvin (2006) criticizes the claims by Gulati (2003), Dean and Brown (2004) by arguing instead that, communities displaced as result of exploration can receive compensation and substantial flows of revenue when a large exploration project is established. He further added that, these compensations can act as an important catalyst for change and growth in terms of economic development of the marginalized groups in and around the exploration projects. According to Garvin (2006) for areas previously peripheral to the hard economy, these monetary flows can transform the economic and social basis of the marginalized communities around the projects. The types of payments and the way they are used are normally a key to mining's ability to contribute to sustainable development at the community level.

On gender disparity, Ledgerwood, (2002) stated that exploration projects provides an opportunity for reducing gender disparities through direct and indirect employment and through access to project services. He further postulated that during the operational phase, women can benefit from a parallel process of encouraging diversification in the local economy and skills development and this would also help to cushion the shock of current downsizing of women empowerment. Gulati and Singh (2003) in support to claims by Ledgerwood (2002) gave the example of the exploration companies in Zambia which have provided neo-natal health care for women in occupational marginalized communities. This has helped to empower women in such marginalized areas. However, Hussain (2010) criticizes much on what has been claimed by Gulati and Singh, (2003) and Ledgerwood (2002). He said that in

as much as some of the marginalized women have been empowered in some region, the problem of discrimination against them is still rampant in most of the countries. He however stated that the lack of job opportunities for women in exploration sites is aggravated by other limiting factors, including the relative isolation of many exploration activities, the absence of local markets to support other economic activities, a lack of credit facilities, and insecure tenure, with the provision of homes often being dependent on the employment of spouses. And since women are often responsible for subsistence activities, as farmers, herders, and agriculturists, they are likely to be disproportionately affected by any negative environmental consequences of exploration projects. Further, women face not only the burden of subsistence production on land degraded by exploration project developments; they may also lose assistance in this task, as the men go to the mines.

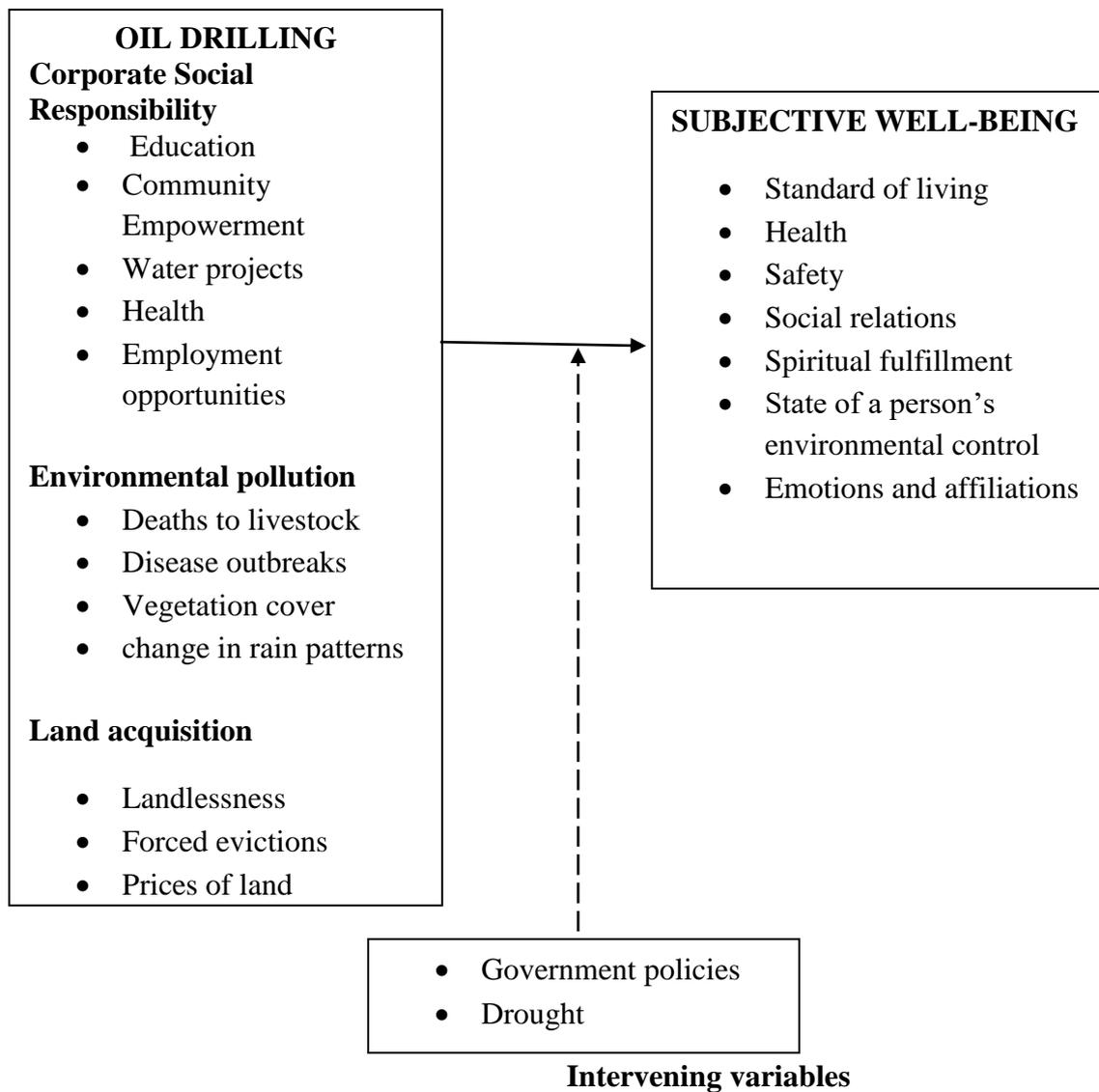
Arce (2004) pointed out that there are adverse challenges the marginalized communities experienced as a results of exploration undertakings in such marginalized areas. Among the challenges he stated includes the issue of landlessness. On account to this, Arce (2004) pointed out that expropriation of land removes the main foundation upon which people's productive systems, commercial activities, and livelihoods are constructed. This is the principal form of de-capitalization and pauperization of displaced people, as they lose both natural and human-made capital. This however interferes with the social setup of these communities as it requires them to move out of these regions. Further, Arce claimed also on the issue of joblessness among the local people as among the challenges brought by exploration activities. The risk of losing wage employment as a result of rural displacements for those employed in exploration sites, in addition, such projects subject the communities

displaced to homelessness. Loss of shelter tends to be only temporary for many resettlers; but, for some, homelessness or a worsening in their housing standards remains a lingering condition. In a broader cultural sense, loss of a family's individual home and the loss of a group's cultural space tend to result in alienation and status deprivation. However, contrary to Arce arguments, most governments have formulated mineral development policies as well as initiating consultation with marginalized communities, and the move by exploration companies negotiating directly with central government has helped to reduce the above challenges in the recent past (Schuler & Namioka, 2009).

### **1.10 Conceptual Framework**

The conceptual framework sets the stage for the presentation of the particular research questions that drives the investigation being reported based on the problem statement (McGaghie, 2001).

The researcher conceptualizes that the subjective wellbeing of the local communities can be influenced positively or negatively by three independent variables that include: corporate social responsibility, environmental pollution and land acquisition by the oil firms while subjective well-being is the dependent variable. This relationship can be influenced by government policies and drought which can intervene as indicated in Figure 1.1.

**Independent variables****Dependent variable**

**Figure 0.1 Conceptual framework depicting the relationship between oil drilling and household wellbeing**

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section of literature review seeks to examine and bring out any existing theories on the topic of study and the empirical data or information that has been accrued on the subject through research by various scholars over time.

#### **2.2 Subjective Wellbeing**

Wellbeing can be defined as the state of being comfortable, healthy or happy. It is a condition of an individual or a group. A high level of wellbeing means in some sense the individual or group's condition is positive. Wellbeing is a positive outcome that is meaningful for people and for many sectors of the society, because it tells us that people perceive that their lives are going well. Scholars have not agreed on a single definition of wellbeing but they generally agreed that it includes the presence of positive emotions and moods, the absence of negative emotions, and satisfaction with life, fulfillment and positive functioning. Many indicators that measure living conditions fail to measure what people think and feel about their lives, such as the quality of their relationships, their positive emotions and resilience, the realization of their potential or their overall satisfaction with life (Diener, 2000).

##### **2.2.1 Measurement of Wellbeing**

Wellbeing is subjective and therefore it is measured with self-reports (Diener, 2000). The use of self-reported measures is fundamentally different from the use of objective measures like household income, unemployment levels which are often used to assess wellbeing.

There are many wellbeing instruments available that measure self-reported wellbeing in different ways, depending on whether one measures wellbeing as a clinical outcome, a population health outcome, for cost effectiveness studies or for other purposes. Wellbeing measures can be psychometrically based or utility based. Psychometrically based measures are based on the relationship between and strength among, multiple items that are intended to measure one or more domains of wellbeing. Utility based measures are based on an individual or groups preference for a particular state and are typically anchored between 0 (death) to (optimum health).

Although single-occasion self-reports of subjective wellbeing (SWB) has a degree of validity and interesting conclusions have emerged from studies using them, the artifacts mentioned above suggest caution (Diener, 2000). It is therefore advisable that researchers combine other types of measures with one item scales. Additional methods, such as physiological measures, reports by informants, and memory and reaction-time measures also should be included in complete assessments of subjective wellbeing (SWB). In addition to using diverse assessment methods, researchers need to use measures of both pleasant and unpleasant affect, because both are major components of SWB. Wellbeing has three elements namely:

(i) Life Evaluation

Life evaluation is an assessment of life as a whole or some specific aspect about it. It is normally based on the judgment of an individual rather than description of an emotional state. According to (Diener *et al.*, 1991), life evaluation entails an individual constructing a standard that they perceive to be appropriate for them and then comparing the circumstances of their lives to that standard. The common measure of life evaluation is “life as a whole.” Nevertheless, it is also possible for

people to provide evaluations of some aspects of their lives like health, jobs. This has made a strong relationship to exist between whole life evaluation and evaluation of a specific aspect of life.

(ii) Affect

It is a state that is used to describe a person's feelings. Feelings and emotional state are typically measured with reference to a particular point in time. It captures how people experience life rather than how they remember it (Kahneman *et al.*, 1999). While the life evaluation can be captured under one measure, affect has at least two dimensions of positive affect and negative affect (Kahneman *et al.*, 1999). The positive affect measures all the pleasant experiences like joy, happiness while the negative affect captures the unpleasant experiences like sadness, fear and anxiety. Positive affect is uni-dimensional and therefore appear on the same axis while the negative affect is multi-dimensional because someone can experience sadness without necessary having fear or anger. The multi-dimensional nature of affect raises an interesting question about the relationship of affective states to life evaluation. Life evaluations are uni-dimensional in that different experiences can be rated unambiguously as better or worse. Kahneman *et al.*, (1999) argue for the existence of a "good/bad" axis on which people are able to place experiences based on the emotional states they are experiencing. In effect, he argues, people are able to make an overall judgment about the net impact of their affective state at a particular point in time. In principle, this is the same process that is involved in forming life evaluations from remembered affective states. Kahneman's point is that affective states can be compared and that one can therefore reasonably aggregate measures of current affect.

For this reason, affect measures are sometimes reported in terms of affect balance, which captures the net balance between positive and negative affect (Krueger, 2006).

The measurement of affect poses different challenges to the measurement of life evaluation. It is difficult to ask people to recall affective states in the past, since responses will be affected by recall biases such as the peak/end rule mentioned above. The gold standard for measuring affect is the experience sampling method (ESM), where participants are prompted to record their feelings and perhaps the activity they are undertaking at either random or fixed time points, usually several times a day, throughout the study period, which can last several weeks (Krueger, 2006). To maximize response rates and ensure compliance throughout the day, electronic diaries are often used to record the time of response. While the ESM produces an accurate record of affect, it is also expensive to implement and intrusive for respondents.

A more viable approach is the use of the day reconstruction method (DRM), in which respondents are questioned about events from a time-use diary recorded on the previous day. Research has shown that the DRM produces results comparable with ESM, but with a much lower respondent burden (Kahneman, 2004). Experience Sampling, the DRM and similar methods for collecting affect data in time-use studies allow for analysis that associates particular affective states with specific activities. It is also possible to collect affect data in general household surveys.<sup>4</sup> However, affect measures collected in general household surveys lose some detail due to the need to recall affect (even if only what affective states the respondent experienced on the previous day) and also cannot easily capture information linking affect to particular activities.

(iii) Eudemonia (Psychological “Flourishing”)

Apart from life evaluation and affect which focus on a person’s experiences whether current or recalled, some definitions of wellbeing found in the psychological literature include a person’s psychological processes as well. A whole literature focusing on good psychological function also known as “flourishing” is in place (Huppert, 2009). Eudemonia goes beyond respondent’s reflective evaluation and emotional state to focus on functioning and realization of a person’s potential. Eudemonic conceptions of subjective well-being thus differ significantly from the evaluative and affective components in that they are concerned with capabilities as much as with final outcomes and thus have a more instrumental focus.

While there is now a general consensus on the distinction between life evaluations and affect, the conceptual structure of eudemonic well-being is less well fleshed out. It is not clear, for example, whether eudemonic well-being describes a uni-dimensional concept in the sense of life evaluation, or whether the term is used to cover a range of different concepts. It is, however, clear that eudemonic measures of well-being capture important aspects of people’s subjective perceptions about their own well-being that are not covered by either life evaluations or affect. For example, having children has a negligible (or even mildly negative) correlation with average levels of life evaluation (Dolan, 2008), while child care (even of one’s own children) is associated with relatively low levels of positive affect (Kahneman, Diener, & Schwarz, 1999). This conflicts with the intuitive assumption that children, at least for those who choose to have them, contribute in some way to their parent’s well-being. Indeed, people with children report much higher average levels of meaning or purpose in their lives than other respondents (Marks, 2008).

### **2.2.3 Wellbeing among the Turkana**

The concept of wellbeing among the Turkana community can only be understood based on the pastoral setting of the Turkana people. To be comfortable or be generally contented among the Turkana people involves a household having a large herd of livestock in excess of 3000 comprising of the big domestic animals of Camels and Cattle to the small animals which are goats, sheep and donkeys. The livestock should be very healthy for the household to be at total peace. Wellbeing is in addition achieved among the Turkana people when the large and healthy herd of livestock owned by one household has unrestricted access to the pasture land and water is readily available (Department of Livestock Turkana, 2014). A household can only be at peace when the large herd can easily access pasture in their land and water is readily available. The absence of any of the two can bring unrest among the household members.

The pastoral set up of the Turkana people has made them susceptible to attacks from the neighboring communities as they compete for the available limited pasture and water points. A household is deemed comfortable among the Turkana community if it experiences high levels of peace and security from external attacks. Peace and security ensures that there is no loss of livestock and human life, this ensures that the herd grows and a man can comfortably clear the dowry of his wife with the in-laws and undergo all the rites as per the traditions of the land (Department of Livestock Turkana, 2014). Once a household has achieved all the above from the head having large herds to clearing all the rites required of a man, the wellbeing of that household is said to be good among the Turkana community.

## **2.3 Oil Mining in Turkana**

### **2.3.1 Oil Discovery in Turkana County, Kenya**

Oil exploration in Kenya began in the 1950s with Shell and BP petroleum companies carrying out the first survey work, mapping out major geological basins, and drilling the first oil well in 1960. Over 40 wells have since been drilled on and offshore, but it was not until 2012 that potential commercially viable oil resources were discovered through Tullow Oil's Ngamia 1 well, together with subsequent findings in Turkana County in Kenya's north-western region (Patey, 2014). 2012 signaled a turning point in Kenya's economic fortunes. Discovery of crude oil reserves in 2012 by Tullow Oil, a UK based firm ushered the nation into the league of natural resource endowed nations, offering a more promising economic outlook. To date, Kenya's oil resources are estimated to be over 600 million barrels and new discoveries are still in the horizon (Patey, 2014).

The Country already enjoys a well-diversified economy which could be boosted with the much anticipated oil revenues towards the achievement of its developmental blueprint- Kenya Vision 2030 (KCSPOG, 2014). However, energy experts and civil society groups have cautioned against dangers such as "widening inequality, increasing poverty levels, weakening traditional sectors (Dutch disease) and violent conflicts. Particularly, with a struggling manufacturing sector and Kenya's over-reliance on agriculture-fed economy, an occurrence of the dreaded "Dutch disease" could cause major setbacks to the economy" (KCSPOG, 2014). The civil society groups readily highlight the collapse of Nigeria's ground-nut industry and Angola's coffee industry as examples of how oil can adversely affect traditional economies.

These concerns become even more glaring when situated within the context of the geographical location of the resource. Turkana County, the largest out of Kenya's 47 counties is home to almost a million people most of who survive on pastoralism, subsistence agriculture and fishing. The region's arid/semi-arid lands and ensuing droughts have created a long history of marginalization thereby leaving its inhabitants heavily dependent on cycles of development projects by non-state actors.

Exploration activities in Turkana County commenced in 2011. By 2012, there was initial exploration success with the discovery of oil at Ngamia which led to further exploration activity in the South Lokichar Rift Basin which lies in Turkana County in North western Kenya. While exploration campaigns continued in various blocks, Tullow progressed with the appraisal activities where wells were drilled in order to establish the behavior of the reservoir, the productivity of wells and the characteristics of the oil and gas (Tullow, 2015).

Since the discovery of oil, there has been heightened interest in Turkana County with investors, speculators and opportunity seekers flocking to the area. This has raised a clamour over ownership of land, the resource itself and its consequent benefits. Oil discovery also coincided with the transition of government administration. Following the review of Kenya's constitution in 2010, devolution of powers came into effect in 2013, one year after oil discovery. What this means is that the Central Government has lost its totalitarian powers of ownership and now has to implement a revenue sharing formula that is all inclusive. Production sharing agreements and regulatory frameworks that will ensure equitable distribution of oil resource benefits, however, have been fraught with contradictions leading to the all-important questions; can Kenya avoid the resource curse that has plagued its counterparts in Africa?

### **2.3.2 Case Study of the Nigerian Resource Infamy**

Oil production in Nigeria has witnessed a substantial scale of local and international documentation on the substantial scale of environmental degradation and injustices meted out to the host communities, collectively referred to as the Niger Delta region, comprising of nine states (Nwoko, 2014; Sayne, 2015). The Country's history of oil and gas exploration dates back to 1956 when crude discoveries were made in modern day Bayelsa State by the Royal Dutch Oil Company- Shell. Oil exploration peaked in the 1970s and with the boom, came unintended outcomes. Oil wealth became synonymous with suffering and poverty for several reasons.

Decades of oil extraction in the Niger Delta engineered a wide-scale contamination of the environment that remains an issue till date. The full extent of the contamination primarily caused by gas airing and oil spills were obscured by foreign interests and military suppression of indigenous voices. The intimidation of host communities reached its peak and invited global attention with the hanging of Ken SaroWiwa, then leader of the Movement for the Survival of the Ogoni People (MOSOP) in 1995. The struggle was for a reversal of exploration activities that had destroyed traditional livelihoods of fishing and farming as a result of land degradation from oil spills. Scholars like Makinde (2007) and Nwoko (2014) argue that the problem was not the absence of legal environmental frameworks but the willful negligence of the law. The issue, they submit, is that "there are no effective compliance and enforcement mechanisms in place, and secondly, there is also massive bribery and corruption in the petroleum industry and these therefore, makes the laws ineffective (Nwoko, 2014). Thus, environmental negligence and accountability remain a problem and environmental consequences in the Niger Delta region, are yet unsolved (ibid). An

independent study carried out in 2011 by the United Nations Environment Programme (UNEP) in the Ogoni land area of the Niger Delta region, concludes that “the pollution of soil by petroleum hydrocarbons in Ogoni land is extensive in land areas, sediments and swampland. Most of the contamination is from crude oil” (UNEP, 2011) the report holds that, vegetation, aquatic life and the health of residents are in desperate straits.

To place this with the case of Kenya, the Turkana community, civil society and local governments have expressed doubts over the environmental impacts of oil drilling on the already fragile environment. Access to Environmental Impact Assessment documents that should predict the extent of damage or impact have not been elusive. According to a study commissioned by the United Kingdom Department for International Development (DFID) and published in June 2013, “a 50 million dollar World Bank Grant for natural resource governance requires the government to first conduct a strategic environmental and social assessment to protect water supplies, the habitat, tourism agriculture and pastoralism.” The primary aim of any socio-economic impact assessment is to bring forward a more equitable, justifiable and sustainable ecosystem. Failure to do this, as studies have shown, results to rise in conflicts and violence, evidenced in the dawn of the Niger Delta militancy, pipelines vandalism and kidnappings of expatriate workers. Against the foregoing, it becomes pertinent to ask, have Kenya’s National Government and oil companies learnt anything from the Niger Delta crises?

## **2.4 Corporate Social Responsibility**

Oil drilling brings about desirable and undesirable impacts to the host communities (Karl, 1997). The drilling companies attempt to mitigate the undesirable effects by initiating projects dubbed Corporate Social Responsibility CSR. These projects are meant to help the people who are at risk because of the oil drilling activities. The main aim of the CSR is to minimize the suffering brought about by oil drilling and ensure that the host communities are comfortable and enjoying the benefits from oil drilling, the projects are geared towards improving the livelihoods of the host communities (Gabriel, 2007).

Corporate Social Responsibility is perceived and implemented differently by various companies at particular times. This is simply because CSR has no single universally accepted definition (Pedersen, 2006; Dahlrud, 2008). Prieto (2006) defines CSR as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders” voluntarily as they exceed the obligatory requirements in order to address the needs of the society. Many scholars have been involved in debates on how CSR should be conducted but have not arrived at a consensus. Majority of the scholars argue that CSR should be made mandatory through legislation (Carroll, 1991) while another set of scholars advocate that the desire for these companies to obtain social license to operate is enough to warrant them to promote CSR, especially the multinational companies (Elsbach, 1994) and therefore CSR should remain voluntary.

These debates drive us to the reasons as to why companies undertake CSR. Rodrigues (2006) argues that companies undertake CSR either for normative or business reasons. Normative in the sense that companies engage in CSR simply because they feel that it

is morally right to do so and in business perspective, companies engage in CSR with the sole aim of expanding their economic growth and success. However, there are situations where companies engage in CSR activities because of the combination of the two reasons (Smith & Craig, 2003).

The kind of pollution of water both underground and surface water caused by oil drilling activities and the destruction of the livelihoods of the host communities threatens the wellbeing of those communities and calls for proper compensation mechanisms in the form of a strong CSR strategy. Failure by the drilling companies to implement a commensurate compensation scheme leads to community unrest which brings about resistance as witnessed in Niger Delta.

Lately, drilling companies have had a paradigm shift when it comes to implementing their CSR. Most drilling companies have set up fully functional stakeholder engagement and social investment departments whose work is to carefully listen to community concerns and ensure that they undertake CSR projects that are beneficial to the hosts (NPN, 1998). Lund-Thomson (2005) agrees with this statement by insinuating that oil companies have been reporting that they have been consulting the host communities concerning their CSR projects. Nevertheless, he feels that the consultation came into place because of massive pressure from the international NGO and community based Organizations working with the community.

Tullow Oil Company that is one of the leading oil drilling companies seems to have learnt a lesson from the experience of the other companies in terms of CSR to the host communities and the impacts of oil drilling to the host communities. Through its 2012

CSR report, the company acknowledged that their understanding of social responsibility was maturing continuously as they had achieved 22 out of the maximum 27 EHS standards and they were working to develop their own social performance standards by 2013. The report adds that the company funded a 1.5 million dollar marine environmental study conducted in Gabon over a period of 2.5 years with the aim of collecting biodiversity data which could be used by the company to ensure that its planned offshore drilling doesn't affect the ecosystem of endangered species such as turtles, whales and dolphins (Tullow, 2012). The company partnered with Wildlife Conservation Society (WCS) in this particular research because of the expertise WCS has on marine studies.

In March 2014, Tullow Oil Company implemented a Light Vehicle Scheme (Tullow, 2014) worth \$2.5 million to purchase 36 vehicles to be given to local businesses on 3-year lease and buy contract. These business investments in additions to few skilled opportunities available to the local community were perceived by them to be inadequate (Cordaid, 2015). This resulted in increased community dissatisfaction with Tullow Oil over their business and employment policies, which later on escalated to violent demonstrations which ultimately led to temporary suspension of Tullow Oil operations for about two weeks. Some of the CSR activities undertaken by oil firms are on; Education, Health provision, Water projects, Community Empowerment, employment opportunities.

#### **2.4.2 Types of Corporate Social Responsibilities CSR**

Corporate social responsibility initiatives are standards and measures that business put in place to benefit society (Pedersen, 2006). Generally speaking, these initiatives are based on sustainability in four different categories.

a. Environmental Responsibility

Environmental sustainability initiatives enacted by businesses generally focus on two main areas: limiting pollution and reducing greenhouse gases. As the awareness of environmental issues grows, businesses that take steps to reduce air, land and water pollution can increase their standing as good corporate citizens while also benefiting society as a whole (Prieto, 2006).

b. Philanthropic Initiatives

Philanthropic initiatives include the donation of time, money or resources to charities and organizations at local, national or international levels. These donations can be directed to a variety of worthy causes including human rights, national disaster relief, and clean water and education programs in underdeveloped countries (Carroll, 1991).

c. Ethical Business Practices

The primary focus on ethics is to provide fair labor practices for businesses' employees as well as the employees of their suppliers. Fair business practices for employees include equal pay for equal work and living wage compensation initiatives. Ethical labor practices for suppliers include the use of products that have been certified as meeting fair trade standards. For example, Ben and Jerry's Ice Cream uses fair trade-certified ingredients like sugar, cocoa, vanilla, coffee and bananas (Carroll, 1991).

d. Economic Responsibility

Economic responsibility focuses on practices that facilitate the long-term growth of the business, while also meeting the standards set for ethical, environmental and philanthropic practices. By balancing economic decisions with their overall effects on society, businesses can improve their operations while also engaging in sustainable practices (Carroll, 1991).

### **2.4.3 Influence of CSR on Wellbeing**

The CSR projects undertaken by companies can influence the wellbeing of the beneficiaries. Philanthropic CSR which involves donations of money to charity organizations like NGOs who engage in worthy courses which directly impact on the lives of the beneficiaries and economic CSR which involves issues to do with employment of the people largely influences the wellbeing of the targeted communities (William Harrah Collage, 2016). The needs satisfaction theory once applied on the targeted beneficiaries of CSR projects clearly reveal that indeed the CSR influences the wellbeing of the people around the projects.

### **2.4.4 Corporate Social Responsibility in Turkana Oil**

Social investment is a critical component of any business and the communities around their operations.

Tullow Kenya is committed to implementing social investment initiatives in Turkana. These initiatives aim is to enhance shared prosperity and focus on four key areas: health, education, environment and water. To date, Tullow Kenya has implemented projects worth \$4.5 million in Turkana (Tullow Oil, 2015).

Social investments in Turkana fall under the four thematic areas; health, education, environment and water and must adhere to four key mandatory criteria: they must be focused on:

- (i) Business objectives- What economic benefits does it deliver to the host community/country.
- (ii) Efficient- How will the project be managed, and by who? What is the track record of the implementing party?

(iii) Compliant- Does the proposed project conform to the relevant laws/by-laws? How does it link in with Government development plans (national and / or regional/district plans) and Tullow Standards

(iv) Sustainable. The mandatory criteria helps us to ensure that the process of choosing the projects is community driven, has a business case and has a strong sustainability focus.

Through Tullow's programme Social Investment project, over 29 students from Turkana have benefitted from Tullow Group Scholarship Scheme to undertake Oil and Gas focused master's degrees in top UK universities. The company sees this as a big investment into the future of the industry not only in Turkana County but also in Kenya as a whole where skills in Oil and Gas sector will help drive economic growth across the whole country (Tullow Oil, 2015).

Some of the Social Investment projects completed by Tullow Oil in Turkana County include social infrastructure and water developments. The full list of the CSR development projects in 2015 undertaken by Tullow is given in Appendix D.

## **2.5 Environmental Pollution of Oil drilling**

Pollution is the introduction of contaminants into the natural environment that causes adverse change (Constantaras, 2014). Pollution can take the form of chemical substances or energy, such as noise, heat or light. Pollutants, the components of pollution, can be either foreign substances/energies or naturally occurring contaminants.

Operations of the oil companies have generated harmful consequences in the form of environmental degradation and pollution which in turn, have resulted in militant resistance from the host communities. But it is noteworthy that such grievance has

been induced not only by the activities of multinationals but also by the perceived deficits in government policy. For example, legislation has stripped local people of the necessary benefits they would have derived from oil companies in the event of environmental damage emanating from oil production (Douglas, 2004).

A case in point is Nigeria's Land Use Act of 1978 which vests ownership and control of all land in the government. Hence, local communities cannot claim to have any vested interest in the use and the consequences of the use of their land. As a result of this legislation, oil companies usually deflect the responsibility for the environment to the government. The government in turn, more often than not, passes this responsibility to the multinationals, as it argues that this duty constitutes part of the social responsibility profile of Multi-National Corporations (MNCs). In any case, this buck-passing does not address the concerns of the oil-bearing communities regarding environmental governance, leading to activism and militancy on the part of the people of the region. Although there is no universally or generally acceptable definition of the concept of corporate social responsibility (CSR), it enjoys wide acceptability in international economic relations. Simply defined, CSR implies the demonstration of certain responsible behavior on the part of governments and the business sector towards society and the environment (Douglas, 2004).

The concept has been promoted through the initiatives of two international organizations as a measure of drawing global attention to the necessity by governments and business to demonstrate a degree of responsibility toward society. The Business Council for Sustainable Development (BCSD) and the World Industry Council for the Environment (WBCE) later formed WBCSD (which comprises about 140 international companies) in 1995, as a driving force behind CSR globally. The WBCSD defines CSR as; the continuing commitment by business to behave ethically

and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large. WBCSD's definition of CSR focuses essentially on major issues, key among them being environmental protection. It is possible to determine the extent to which companies exhibit CSR in their areas of operations by evaluating their performance vis-à-vis these major issues (Douglas, 2004).

The environmental dimension of oil exploration is a chief cause of social dislocation. Hazardous wastes, site contamination, and the lack of sufficient protection of surface and subsurface waters, biodiversity and air quality (both in the immediate vicinity of the oil project and in relation to global concerns such as ozone depleting substances and greenhouse gases) have endangered the health of local populations near oil installations and pipelines and destroyed local livelihoods such as farming and fishing. Local communities, for example, report a sharp rise in infantile leukemia near oil facilities. This disruption is most profound among ethnic minorities and indigenous peoples who live off the land and whose customs and traditions may also be threatened. The fate of the Niger Delta region, where exploration began in 1958, is the best known example of the local impact of oil exploration (Douglas, 2004).

For instance, despite the fact that Shell Petroleum Development Company (SPDC) is a prominent member of WBCSD and given the environmental guidelines established by the Nigerian State through Department of Petroleum Resources (DPR) and the Federal Environmental Protection Agency (FEPA), the company has witnessed more protests than other oil companies that operate in the region. This might not be unconnected with the inability of the Nigerian government to implement the environmental laws as they are established. It is also interesting to note that the Nigerian environmental regulations and standards through DPR and FEPA compare

favorably with those of advanced Western countries such as Canada and the United States but the issues of implementation as mentioned above remains a challenge. Given this limitation, the oil companies have not always addressed in a satisfactory manner the impact of oil production on the environment and the local people. And in some cases these companies find it convenient to claim sabotage as the cause of oil spills even if available evidence suggests something contrary to the companies' claims (Douglas, 2004).

Shell admitted that there were 815 oil spills between 1997 and 1999, out of which 170, an alarming 20.85%, were caused by its corrosive pipelines. It should be stressed that, Shell did not include the volume spilled at Ekakpmre, Delta State, in its calculation of the 1999 volume. It blamed that oil spill on 'sabotage', just as it has always done in cases of massive oil spills caused by its corrosive pipelines. The charge of sabotage comes in handy for oil companies as it potentially exonerates them from blame and frees them from the responsibility to clean up the environment. The many cases of oil spills resulting from corroded pipelines illustrate negligence on the part of both the Nigerian state and the oil companies. Such negligence is to the detriment of the local people of the region. Therefore, the policies of oil multinationals in the Niger Delta have been a major source of prevailing violence in the region (Douglas, 2004).

As part of his environmental advocacy, Ken Saro-Wiwa had campaigned from village to village on the need for the government to address the problems of the Niger Delta, especially the marginalization of the Ogoni nation in the national scheme of affairs. This campaign took him to Giokoo village on May 21, 1994, where some conservative chiefs (allegedly being sponsored by government) were meeting. The attempt by soldiers to turn him back culminated in violent confrontation in which the

youths in the village killed four chiefs. This incident led to the immediate arrest and detention of Ken Saro-Wiwa and many other Ogoni activists. They were later arraigned before a special military tribunal, which sentenced Saro-Wiwa and eight others to death by hanging. The execution was eventually carried out against all entreaties both from within and outside the country. This development (coupled with leadership bickering and state repression) sounded the death knell for the Ogoni struggle, since it lost the vibrancy and militancy associated with it in its early years. A look at the activities of MNCs in Africa shows how oil exploration has engendered environmental and social problems including instability. A successful management regime must derive from consensus among holders and contending community forces, because governance failures in natural resources can lead to conflict and ultimately to violence (Nwankwo & Dule, 2001).

Environmental pollution arising from oil prospecting and exploration in the Niger Delta area of Nigeria has impacted negatively on the biodiversity of the affected areas (Ertel & Ugochukwu, 2008). The main stresses arise from leakages of crude oil, gas flaring and the escape of other chemicals used in production processes. Effects on the flora and fauna of freshwater ecosystems in this part of Nigeria have been noticed. The government has established laws for protection of the environment from oil exploration. However, these laws should be made effective in terms of implementation, enforcement and monitoring by responsible agencies. The oil companies operating in this region have also contributed to reducing the impacts of their activities on the host environment. This paper discusses the various impacts that oil production has had so far on the biodiversity of this unique part of Nigeria, and

reports on efforts made by the government, oil companies and non-governmental organizations to remedy the situation (Ertel, & Ugochukwu, 2008).

The case of Niger delta may be replicated in Lokichar Location if the government and the local leadership fall prey to the drilling companies and neglect the plight of their people. It is already alleged that there has been discharge of chemicals to Twiga 1 well which is less than five kilometers from Lokichar town. The chemicals are alleged to have caused miscarriages in livestock and chest problems to the human beings around the Lomokamar village. The information goes further to state that the heavy rains experienced in the area have brought the chemicals to outside land through surface runoff which is likely to cause more arms to the locals. Reports emanating from the Lokichar Location are devastating, it is alleged that cases of infants being born lame have increased surprisingly even from families with no history of disability. The community members feel that it all came about as a result of oil drilling in the region.

### **2.5.1 Types of Environmental Pollution**

Environmental Pollution occurs when pollutants contaminate the surroundings; which brings about changes that affect our normal lifestyles adversely. Pollutants are the key elements or components of pollution which are generally waste materials of different forms. Pollution disturbs our ecosystem and the balance in the environment. With modernization and development in our lives pollution has reached its peak; giving rise to global warming and human illness (Vinit Mehta, 2018).

Environmental Pollution occurs in different forms; air, water, soil, radioactive, noise, heat/ thermal and light. Every form of pollution has two sources of occurrence; the

point and the non-point sources. The point sources are easy to identify, monitor and control, whereas the non-point sources are hard to control.

Toxic environmental pollution affects more than 200 million people worldwide, according to Pure Earth, a non-profit environmental organization. In some of the world's worst polluted places, babies are born with birth defects, children have lost 30 to 40 IQ points, and life expectancy may be as low as 45 years because of cancers and other diseases. Let us discuss the different types of pollution, their causes and effects on mankind and the environment as a whole (Vinit Mehta, 2018).

a) Air Pollution

It is the most prevalent and dangerous form of pollution especially considered to go hand in hand with urbanization. There are many reasons to it. Primary among these is the excessive fuel combustion which has become a basic necessity for cooking, transport and other industrial activities. This releases umpteen no. of chemicals to the air which are far from being removed from it. These are directly affecting our existence (Vinit Mehta, 2018).

Smoke releases  $\text{SO}_2$  into the air making it toxic. It is caused mainly due to chimneys, factory stacks, vehicles or something as common as 'burning of wood'. Release of  $\text{SO}_2$  and other greenhouse gases into air causes global warming and has capacity to cause acid rain. Global warming or emission of these gases has increased temperatures, erratic rains and droughts worldwide. This has heavily increased the cases of Asthma, Bronchitis and the more dangerous lung cancer, mainly in the metro cities.

Air pollution is believed to end lives of over 20 lakh people every year – a study, published in the journal Environmental Research Letters, says.

One of the major and unfortunate examples of what air pollution can lead to is the Bhopal Gas Tragedy of 1984. It was a direct result of release of methyl isocyanate gas at Union Carbide plant in Bhopal. It killed over 2,000 people, and over 200,000 suffered respiratory problems (Vinit Mehta, 2018). An irritant (e.g. particulates less than 10 micrometers) may cause respiratory illnesses, cardiovascular disease and increases in asthma. Even today there are birth defects in the babies borne, which are believed to be because of the tragedy.

b) Water Pollution

Every living being depends, directly, on water so this has taken a heavy toll on the entire living population. Other than direct dependencies, more than 60% of the species live in some form of water. Thus water pollution is another major type of pollution that needs to be curbed (Vinit Mehta, 2018).

It can be attributed to many factors -industrial effluent dumped into the rivers and sea causes a huge imbalance in the water properties which renders the water bodies unfit for aquatic lives. Water pollution is also a major cause of diseases caused to the non-aquatic species.

Insecticides, pesticides which are sprayed on the plants, pollute the ground water system and oil spills in the oceans have caused irreparable damage to the water bodies. Eutrophication is another big source; it occurs due to daily activities like washing clothes, utensils near lakes, ponds or rivers; this forces detergents to go into water which blocks sunlight from penetrating, thus reducing oxygen and making it inhabitable (Vinit Mehta, 2018).

According to National Oceanic and Atmospheric Administration (NOAA), 80 percent of the pollution in marine environments comes from the land through sources such as runoff. Water pollution can severely affect marine life. For example, sewage causes

pathogens to grow, while organic and inorganic compounds in water can change the composition of the precious resource. According to the EPA, low levels of dissolved oxygen in the water are also considered a pollutant. Dissolved oxygen is caused by the decomposition of organic materials, such as sewage introduced into the water.

Water pollution not only harms the aquatic beings but it also contaminates the entire food chain by severely affecting humans dependent on these. Water-borne diseases like cholera, diarrheas have also increased in all places.

c) Soil pollution

Also known as Land Pollution, this occurs due to incorporation of unwanted chemicals in the soil due to human activities. Use of insecticides and pesticides absorbs the nitrogen compounds from the soil making it unfit for plants to derive nutrition from. Release of industrial waste, mining and deforestation also exploits the soil. Since plants can't grow properly, they can't hold the soil and this leads to soil erosion (Vinit Mehta, 2018).

Food is a big contributor to landfill waste. Up to 40 percent of food produced in the United States is trashed each year, according to the Natural Resources Defense Council.

Commercial or industrial waste is a significant portion of solid waste. According to the University of Utah, industries use 4 million pounds (1.8 million kg) of materials in order to provide the average American family with needed products for one year. Much of it is classified as non-hazardous, such as construction material (wood, concrete, bricks, glass, etc.) and medical waste (bandages, surgical gloves, surgical instruments, discarded needles, etc.). Hazardous waste is any liquid, solid or sludge waste that contain properties that are dangerous or potentially harmful to human health or the environment. Industries generate hazardous waste from mining,

petroleum refining and pesticide manufacturing and other chemical production. Households generate hazardous waste as well, including paints and solvents, motor oil, fluorescent lights, aerosol cans, and ammunition (Vinit Mehta, 2018).

While the above three are most common forms of Pollution that we hear about, there are few other forms of Pollution that have seemed to grow at an alarming pace these days. Let us briefly look at what they are.

d) Noise pollution

It is caused when a noise which is of higher intensity than 85 decibels reaches our bare ears. It may lead to psychological problems like stress & hypertension. It can also lead to permanent hearing impairment, which is worse. It is mainly caused by loud pumps and compressors in the chemical industries. Even marriage functions and rock music concerts are often ignored contributors to this type of pollution (Vinit Mehta, 2018).

e) Radioactive pollution

This is considered one of the most dangerous pollution because of its permanent effects. An un-arrested upset in a nuclear plant, careless nuclear waste disposal can cause cancer – skin, blood, infertility due to exposure, birth defects and blindness; it has the ability to permanently change soil, air and water the major sources of life. It can even cause mutation in species which can propagate for ages (Vinit Mehta, 2018).

f) Thermal/heat pollution

This is caused as a result of excessive heat release in the environment. This leads to irreversible and undesirable changes of almost permanent nature. Industries and Vehicles are direct contributors to this. Deforestation is an indirect contributor. Other than the greenhouse gases, this has increased the earth's temperature, and has

potential to cause drastic climatic changes; and wildlife extinction (Vinit Mehta, 2018).

g) Light pollution

Whenever illumination available is more than what's required in an area, this pollution kicks in. It is more noticeable in big cities, on advertising boards and billboards, mainly during large scale events or Concerts, sport events & even weddings, at the night. It mainly affects the astronomical observations by making the stars very difficult to observe & study (Vinit Mehta, 2018).

### **2.5.2 Influence of Environmental Pollution on Wellbeing of Turkana**

*Environment Degradation:* Environment is the first casualty for increase in pollution weather in air or water. The increase in the amount of CO<sub>2</sub> in the atmosphere leads to smog which can restrict sunlight from reaching the earth; this affects the process of photosynthesis in plants. Gases like Sulfur dioxide and nitrogen oxide can cause acid rain. Water pollution in terms of Oil spill may lead to death of several wildlife species (Vinit Mehta, 2018).

*Human Health:* The decrease in quality of air leads to several respiratory problems including asthma or lung cancer. Chest pain, congestion, throat inflammation, cardiovascular disease, respiratory diseases are some of diseases that can be caused by air pollution. Water pollution occurs due to contamination of water and may pose skin related problems including skin irritations and rashes. Similarly, Noise pollution leads to hearing loss, stress and sleep disturbance (Vinit Mehta, 2018).

*Global Warming:* The emission of greenhouse gases particularly Carbon dioxide is leading to global warming. Every other day new industries are being set up, new vehicles come on roads and trees are cut to make way for new homes. All of them, in direct or indirect way lead to increase in CO<sub>2</sub> in the environment. The increase in

Carbon dioxide leads to melting of polar ice caps which increases the sea level and pose danger for the people living near coastal areas (Vinit Mehta, 2018).

### **2.5.3 Environmental Pollution among the Turkana**

The Turkana people have little knowledge on environmental pollution but ever since the inception of Tullow Oil in Turkana, there has been heightened sensitization on environmental hazards associated with Oil drilling. The Turkana people believe that the fumes from Oil firms going to the atmosphere are dangerous to them and their animals, the cutting down of trees by the Oil firms as they create space for construction of camps has left the already dilapidated environment in a pathetic state. The local community no longer enjoys a lot of rain like before and is alleging that the rain seasons are no longer predictable because of the effects of Oil mining (FOLT, 2016).

The increased traffic due to Oil mining has brought about a lot of dust which has led to increased respiratory diseases both to the humans and livestock. The Turkana people also believe that their grazing lands are gradually being taken away from them which have led to overgrazing and overcrowding. This has put a lot of pressure on the available natural resources making the carrying capacity exceeded (FOLT, 2016).

The action of the oil company to dump potentially harmful silicate in Twiga well in Lokichar was received with mixed reactions from the community. The liquid waste was smelly and it was dumped in a manner that it would have been swept by the surface runoff in case of a heavy downpour. This has created tensions and raised the awareness of the community on the glaring environmental concerns as a result of Oil mining in Lokichar (FOLT, 2016).

## **2.6 Land**

### **2.6.1 Land Tenure**

In common law systems, land tenure is the legal regime in which land is owned by an individual, who is said to "hold" the land. A landholder/landowner is a holder of the estate in land with considerable rights of ownership or, simply put, an owner of land (Stuart Leavenworth and Kiki Zhao, 2016).

There are a great variety of modes of land ownership and tenure;

a.        Traditional land tenure

For example, most of the indigenous nations or tribes of North America had differing notions of land ownership. Whereas European land ownership centered around control, Indigenous notions were based on stewardship. When Europeans first came to North America, they sometimes disregarded traditional land tenure and simply seized land, or they accommodated traditional land tenure by recognizing it as aboriginal title. This theory formed the basis for treaties with indigenous peoples.

b.        Ownership of land by swearing to make productive use of it

In several developing countries such as Egypt, Senegal, this method is still presently in use. In Senegal, it is mentioned as "mise en valeur des zones du terroir" and in Egypt, it is called Wadaa al-yad (Field E, 2005).

c.        Allodial title

Allodial title is a system in which real property is owned absolutely free and clear of any superior landlord or sovereign. True allodial title is rare, with most property ownership in the common law world (Australia, Canada, Ireland, New Zealand, United Kingdom, United States) being in fee simple. Allodial title is inalienable, in that it may be conveyed, devised, gifted, or mortgaged by the owner, but it may not be

distressed and restrained for collection of taxes or private debts, or condemned by the government (Field, 2005).

d. Feudal land tenure

Feudal land tenure is a system of mutual obligations under which a royal or noble personage granted a fiefdom, some degree of interest in the use or revenues of a given parcel of land in exchange for a claim on services such as military service or simply maintenance of the land in which the lord continued to have an interest. This pattern obtained from the level of high nobility as vassals of a monarch down to lesser nobility whose only vassals were their serfs (Field, 2005).

e. Fee simple

Under common law, Fee simple is the most complete ownership interest one can have in real property, other than the rare Allodial title. The holder can typically freely sell or otherwise transfer that interest or use it to secure a mortgage loan. This picture of "complete ownership" is, of course, complicated by the obligation in most places to pay a property tax and by the fact that if the land is mortgaged, there will be a claim on it in the form of a lien. In modern societies, this is the most common form of land ownership. Land can also be owned by more than one party and there are various concurrent estate rules (Field, 2005).

f. Native title

In Australia, native title is a common law concept that recognizes that some indigenous people have certain land rights that derive from their traditional laws and customs. Native title can co-exist with non-indigenous proprietary rights and in some cases different indigenous groups can exercise their native title over the same land (Field, 2005).

g. Life estate

Under common law, Life estate is an interest in real property that ends at death. The holder has the use of the land for life, but typically no ability to transfer that interest or to use it to secure a mortgage loan (Field, 2005).

h. Fee tail

Under common law, fee tail is hereditary, non-transferable ownership of real property. A similar concept, the legitimacy, exists in civil and Roman law; the legitimacy limits the extent to which one may disinherit an heir (Field, 2005).

i. Leasehold

Under both common law and civil law, land may be leased or rented by its owner to another party. A wide range of arrangements are possible, ranging from very short terms to the 99-year leases common in the United Kingdom, and allowing various degrees of freedom in the use of the property (Field, 2005).

j. Common land

Rights to use a common may include such rights as the use of a road or the right to graze one's animals on commonly owned land (Field, 2005).

### **2.6.2 Land Acquisition and Influence on Community Wellbeing**

Land is a factor of production upon which the livelihood of the people is founded on (Birdsall, 2000). The pastoral communities rely on land for grazing of their livestock. Land in pastoral communities is owned communally thereby making the government of the day the custodian of that land.

Land in Turkana County is communal and the custodian of the land is the County Government of Turkana (Constitution of Kenya 2010). The County Government of Turkana holds the land in trust for the people of Turkana. Any investor who is in need of land in Turkana has to consult County Government of Turkana. The government of

Kenya through the legislative assembly has not yet passed the community land bill making any deals involving land acquisition in Turkana Country to be treated with utmost suspicion (Kenya Land Alliance, 2018).

Oil drilling activity requires large chunks of land for establishment of camps and drilling sites. Once the oil companies gain access to a piece of land, the area is fenced off and becomes out of bounds to both human beings and their livestock. This narrows down the grazing fields of the pastoralists and denies them access to their ancestral land (Omoredede, 2014).

The hype associated with oil discoveries and mining results in influx of intruders who will be looking for jobs at the drilling sites. This increases pressure on land around the mine areas which leads to rise in vices like crime, prostitution and cultism. This may lead to tension which affects the livelihoods and the general wellbeing of the local communities around the oil drilling sites (Pantuliano, 2010).

It is clearly evident that in communities where oil drilling takes place and where the multinational companies are involved, the government and the companies enter into secret agreements. Land leasing in pastoral areas will therefore mean domination of the community land and environment by the state governments and their partners, the oil drilling multinationals (Pantuliano, 2010).

### **2.6.3 Land Production**

Land is one of the factors of production. Factors of production are the resources people use to produce goods and services; they are the building blocks of the economy. Economists divide the factors of production into four categories: land, labor, capital, and entrepreneurship (Constantaras, 2014).

Land includes any natural resource used to produce goods and services. This includes not just land, but anything that comes from the land. Some common land or natural

resources are water, oil, copper, natural gas, coal, and forests. Land resources are the raw materials in the production process. These resources can be renewable, such as forests, or nonrenewable such as oil or natural gas. The income that resource owners earn in return for land resources is called rent.

## **2.7 Summary of Literature Review**

The existing literature highlights that the oil drilling companies have done some work in regard to Corporate Social Responsibility but evidently, it is not enough. The Oil drilling exercise has potential effects on the host community's environment and the impacts are already felt by the local community, the drilling companies have a role to play to minimize the environmental effects associated with the oil venture for smooth operations. The existing literature also explains on land access restrictions and land displacement as a result of oil drilling. This calls for proper mechanisms to handle the impacts associated with oil drilling.

## **2.8 Research Gap**

Though, there exists literature on the social, economic and environmental effects of oil exploration and drilling globally, limited research has been undertaken to advance the knowledge on the influence of the ongoing oil drilling in Turkana County especially on the wellbeing of the local community. The oil sector is relatively new in Kenya and therefore this justifies for studies to inform policy. There is limited literature on the influence of CSR from oil drilling companies on the wellbeing of the nearby communities. No specific research has been undertaken to establish the perceptions of the pastoral Turkana community on the oil drilling company activities and how their wellbeing has been influenced by the oil drilling activities. This study therefore focused on the influence of oil drilling on the wellbeing of the local

community and how better the oil drilling companies can implement their CSR for the betterment of the wellbeing of the local community and improved stakeholder relations for smooth operations.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

This chapter outlines the research procedure used in the study. It covers research design, location of the study, population of the study, sampling procedure and sample size, instrumentation, data collection, data analysis and summary of the analytical procedures.

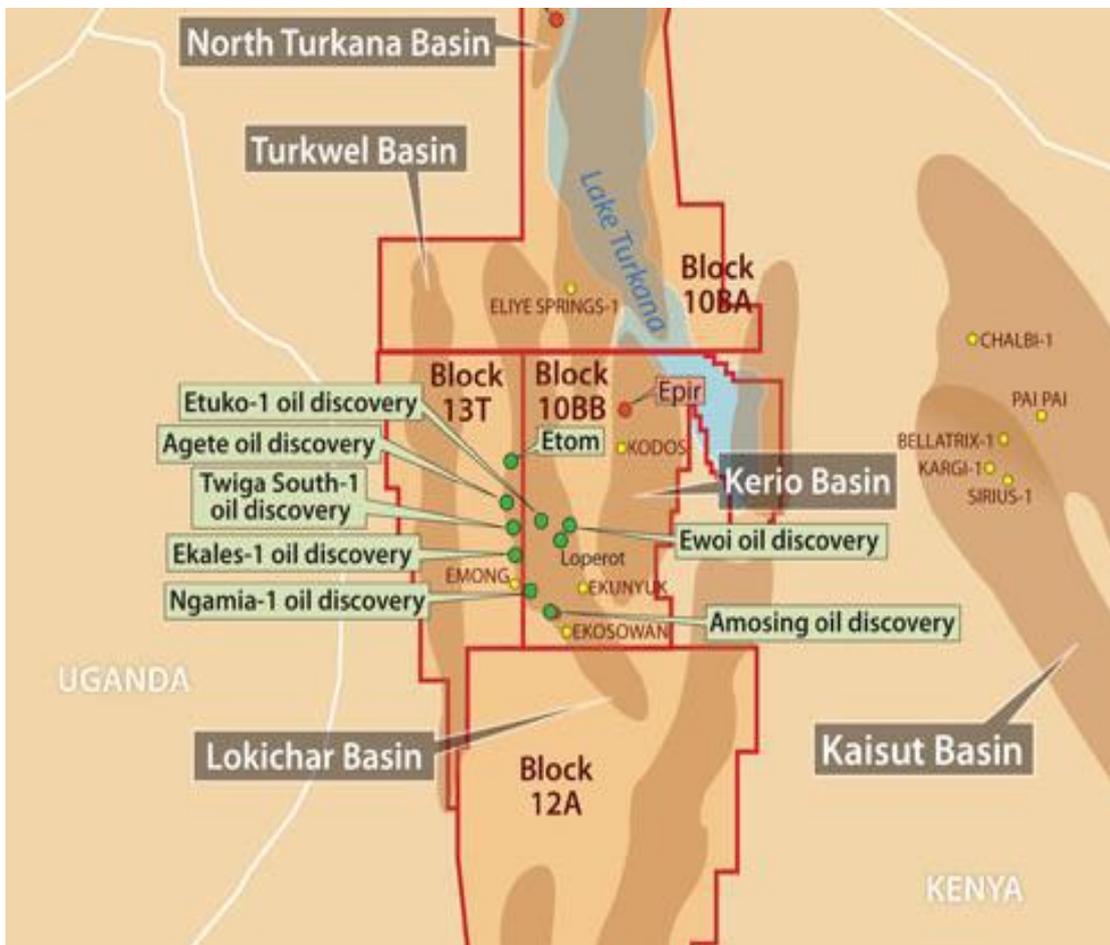
#### **3.1 Research Design**

The study employed the *ex post facto* research design, involving causal comparative (Trochim & Donnelly, 2008). Kathuri and Pals (1993) defined *ex post facto* research as a systematic empirical inquiry in which the researcher does not have direct control of independent variables because their manifestation has already occurred or because they cannot be manipulated. Cohen, Manion and Morison (2000) noted that *ex post facto* designs begins with groups that are already different in some respect and then searches in retrospect for factors that brought about those differences. It seeks to reveal possible relationships by observing an existing condition or state of affairs and then searching back in time for plausible contributing factors (Kerlinger & Lee, 2000). This design was appropriate for this study because the manifestation of the independent variables had already occurred without any manipulation. The influence of the independent variables on the dependent was determined.

#### **3.2 Study Area**

The research was conducted in the Lokichar Location, Turkana County, Kenya where Tullow Oil Company operates (Figure 1). The area was selected because of its proximity to Tullow's largest oil well Ngamia 1. Ngamia 1 forms part of the seven

basins mapped in Tullow's acreage and has a size which is about 9,000 square kilometers (Tullow, 2014). Lokichar Location is located in the southern part of the larger Turkana County; it is in Turkana South Sub County which is one of the seven Sub Counties forming Turkana County. Lokichar Location has hot and warm climate with unreliable rainfall pattern ranging between 300mm to 400mm per annum. Majority of the residents of Lokichar Location depend on nomadic pastoralism as a major source of their livelihood. Goats, camels, donkeys and zebu cattle are the most common livestock kept by the communities in Lokichar Location.



**Figure 0.1: Oil discoveries in Lokichar Basin, Turkana County**  
(Source: Tullow Oil report 2013)

### 3.3 Study Population

The population refers to the group of individuals or objects of research for a particular study (Nanok, 2017). The target population defines those units for which the findings of the survey are meant to generalize.

Sampling is a procedure of selecting a representative section of the population for which research is to be conducted (Mugenda & Mugenda, 1999). Lokichar Location is inhabited by the Turkana tribe who form the majority of the population with Somali tribe coming second followed by Luhya tribe and other tribes form the minority. All the interviews and focus group discussions were conducted in the villages around Lokichar Location because this area comprises of the actual victims of oil drilling activities. The respondents came from villages sampled from the Lokichar Location area. The respondents were selected through random and purposive sampling techniques. According to the 2009 census, the population of Turkana County was 855,399; with Lokichar Location having a population of 23,452. The sample size of the respondents for the survey was determined from the study population as projected by the terms of reference in project area.

### 3.4 Sampling Procedures and Sample Size

The sample size was determined using the (Fishers et al, 1991) method for population above 10,000. The Fishers et al.(1991) based calculation for the sample size for population greater than 10,000 is done in equation 1. Equation for population more than 10,000;

$$n = z^2 pq / d^2$$

Where-:

n =the desired sample size (assuming the population is greater than 10,000)

$z$  =the standard normal deviation, set at 1.96, which corresponds to 95% confidence level

$p$  =the proportion in the target population estimated to have a particular characteristic. If there is no reasonable estimate, then use 50 percent (the study used 0.50).

$$q = 1.0 - p$$

$d$  = the degree of accuracy desired, here set at 0.05 corresponding to the 1.96.

$$\text{In substitution, } n = \frac{1.96^2 \times 0.5 \times (1-0.5)}{0.05^2} = \mathbf{384}$$

The representative mean sample population size is established to be 384 persons. As depicted in Table 3.1, the 384 respondents will be randomly selected and proportionally distributed across the study area community.

**Table 0.1 Sample Household Distribution**

Sub-Location	Total population	Calculation	Sample
Lokichar	10,820	10820/23452*384	177
Kapese	12,632	12,632/23,452*384	207
Total	23,452		384

### 3.5 Description of Research Instruments

The study utilized a semi-structured interview questionnaire, Key Informant Interview guide and Focus Group Discussion guide to collect the required data from respondents.

The study questionnaire consisted of close-ended questions on the study variables, the household socio-demographic characteristics and the modified Subjective Wellbeing correlates of high life satisfaction as per (Diener, 2000). It had eight dimensions which included; material provision, good health, safety, social relations, spiritual fulfillment, state of environment, emotions and affiliations and life achievements. The

eight dimensions had 29 items which were scored by respondents on a scale of 1-10, with 1 being strongly disagree and 10 being strongly agree with the statement. The test yielded an overall subjective wellbeing score and scores for the various components of wellbeing.

The use of the Key Informant Interview and Focus Group Discussions (FGD) helped in triangulation of the results. Furthermore, the interview schedule provided in-depth information important for the study. During Focus Group Discussions some respondents felt encouraged to speak because men were not present, this made them open up to share their experiences freely within the forum and a lot of elaborate information was obtained and clarifications were made where needed.

### **3.5.1 Household Survey**

A semi-structured questionnaire was the most appropriate tool for data collection in this context because the study was targeting a large sample (Nsubuga, 2000). The questionnaire made it possible for the researcher to collect as much information as possible within a short period. In addition, the information on questionnaires remains confidential and it cannot be manipulated because it is on paper. Questionnaires also save time. That is the reason behind the researcher adopting the questionnaire as a tool in this study.

The study also utilized the services of 5 research assistants to assist in field work and visiting and collecting data from all the 384 randomly selected persons. Once all data was received, it was tabulated and summarized in an excel sheet in readiness for analysis using the SPSS statistic tool.

### **3.5.2 Focus Group Discussions**

Focus groups are basically group interviews (Ormrod, 2005). The purpose of focus groups is to understand how people discuss an issue as members of a group (Bryman, 2004). In the focus group, attention is put on how the participants interact with each other than with the interviewer and it is from the interaction of the participants that data emerge (Cohen, 2000). Two Focus Groups Discussions were done in the two Sub Locations of Lokichar and Kapese, the two FGDs were targeting women who had not been given opportunity to participate in the household survey due to cultural restrictions. The women were brought together to nourish the information collected using the semi-structured questionnaire.

### **3.5.3 Key Informant Interviews**

The research purposively selected and used key informants in the study area who were well conversant with the topic of the study. The area chiefs, Tullow oil personnel, politicians, village elders, opinion leaders and youth leaders were targeted under the key informant interviews to gather their perceptions on how oil drilling has influenced their wellbeing and those of the people they represent. The Tullow employees were selected based on the relevance of their positions in the company in relation to the study objectives. The company's CSR manager and the Land Access and Resettlement manager were interviewed. The local leadership will be selected based on how conversant they are with the study topic.

### **3.6 Reliability and Validity of Research Instruments**

The content validity was established during wide reading, discussions and deliberations with peers, supervisors and the researcher's colleagues in the Faculty of Environment and Natural Resource Management of Africa Nazarene University. The

university supervisors were consulted to provide guidance on the content of the instruments to ensure that all the research objectives have been addressed by the questions or information sought in the instruments. The manner of construction of the instruments was checked to ensure that the questions were not misinterpreted and only relevant information is obtained.

### **3.6.1 Validity of Research Instruments**

To establish the accuracy and meaningfulness of the inferences, the researcher discussed and consulted the university supervisors and specialists on the instruments to ensure that all the concepts under investigation were measured. A pilot study was undertaken in Nakukulas Location whereby 20 households were randomly selected and the questionnaire administered to the 20 respondents. Nakukulas was not part of the study area.

### **3.6.2 Reliability of Research Instruments**

Reliability of an instrument is the degree of consistency with which it measures a variable (Mugenda & Mugenda, 1999). To establish reliability of the questionnaire, a pilot study was conducted in Nakukulas Location whereby 20 households were randomly selected and the questionnaire administered to them. Borg and Gall (1989) recommends that the minimum sample size for a pre-test should be 20-30 respondents. The selected Location for pilot study was not part of the study sample to avoid bias. Cronbach's alpha coefficient of 0.70 and above was acceptable for the proposed study. The results of the pilot study helped in restructuring of the questionnaires by incorporating the missing information, omitting irrelevant questions and paraphrasing questions that appear ambiguous to the respondents (Mutai, 2000).

### **3.7 Data Collection Procedure**

A research permit was obtained from the National Council for Science Technology and Innovation (NACOSTI) within the Ministry of Higher Education, Science and Technology after obtaining an introductory letter from the Africa Nazarene University Graduate School. Besides, permission from the local authorities of the communities and the management of Tullow Oil Company to administer the questionnaire to the respondents was sought. The purpose of the study was explained to them to avoid any suspicion thus increasing their confidence in giving information. Prior to data collection, the respondents were informed of the purpose of the study and assured of confidentiality of information provided in order to promote their free and honest participation in the study. An atmosphere conducive to all the respondents was created by the researcher, to enable them open up and answer the questions asked truthfully. The questionnaires were administered by the researcher before the respondents were led through focus group discussions.

### **3.8 Ethical and Legal Considerations**

The researcher ensured that the respondents understood the process in which they were being engaged, including why their participation was necessary, how the data was to be used and to whom it will be reported to. Voluntary informed consent was thus observed where the participants understood and agreed to their participation without any duress prior to the research. The researcher also recognized the respondents' entitlement to privacy and accorded them their rights to confidentiality and anonymity. Where any personal information was to be divulged for whatever reason then the respondent's consent was sought. The study focused on a culturally sensitive area and therefore the services of research assistants who were conversant

with the cultural obligations of the area were employed since the study dealt with the household heads.

### **3.9 Operationalization of Study Variables**

The study collected both quantitative and qualitative data. The qualitative data was coded and converted to quantitative data for analysis. Data was analyzed using both descriptive and inferential statistics within the (SPSS version 22). Descriptive statistics analysis included the use of frequency tables, charts, measures of central tendency and dispersion (means, modes, median, variance and standard deviation and cross tabulation of categorical variables).

Inferential statistics was also used to determine the relationship between variables and to test the research questions. Inferential statistics included regression analysis to determine the influence of the independent on the dependent variables. The t-test was used to compare differences among the two study groups (Mugenda & Mugenda, 1999). In addition, the researcher conducted binary logistic regression analysis so as to determine whether there was a relationship among the independent and dependent variables.

**Table 0.2: Summary of Data Analysis**

<b>Objectives</b>	<b>Variables</b>	<b>Indicators</b>	<b>Statistical Tests</b>
To assess the influence of oil firm's Corporate Social Responsibility (CSR) on the wellbeing of communities in Lokichar Location	<b>Independent</b> CSR <b>Dependent</b> Subjective wellbeing	Education, Health provision, Water projects, Community Empowerment, Employment opportunities	Descriptive statistics (frequencies, means, mode) Inferential (regression, t-test)
To establish the influence of environmental pollution from oil firms on the wellbeing of the communities in Lokichar Location	<b>Independent</b> Environmental Pollution <b>Dependent</b> Subjective Wellbeing	Disease outbreak, Deaths to livestock, Vegetation cover Change in rain patterns	Descriptive statistics (frequencies, means, mode) Inferential (regression, t-test)
To analyze the effects of land acquisition by oil firms on the wellbeing of communities in Lokichar Location	<b>Independent</b> Land acquisition <b>Dependent</b> Subjective Wellbeing	Landlessness Prices of land Forced evictions Compensation for land loss	Descriptive statistics (frequencies, means, mode) Inferential (regression, t-test)

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter consists of the analysis of the data and presents the results of this study based on formulated objectives and study questions as presented in Chapter One. The study investigated the influence of oil drilling on the socioeconomic well-being of households around the oil fields in Lokichar location, Turkana County, Kenya. Descriptive and inferential statistics were used in the analysis of the study.

#### 4.2 Demographic Characteristics of Households in Lokichar Location

Four attributes of the resettled households in the study area, which were considered important to this study are discussed in this section, they include: ethnic communities in the study area, age of the respondents, gender of the respondents, marital status, and educational level.

##### 4.2.1 Sex of Household Heads

The sex of the household head and location of the household was noted during the interview and the data was analyzed and presented in a cross tabulation table showing the frequency of the sex in each location as given in Table 4.1.

**Table 4.1: Sex of the Household Heads in the Sub-location**

	Sex				Total	
	Male		Female			
Sub-location	Frequency	%	Frequency	%	Frequency	%
Lokichar	62	26.6	35	15.0	97	41.6
Kapese	74	31.8	62	26.6	136	58.4
<b>Total</b>	<b>136</b>	<b>58.4</b>	<b>97</b>	<b>41.6</b>	<b>233</b>	<b>100.0</b>

The study results show that in both locations, the number of men was more than that of women. In Kapese, the men who were the majority made up 31.8% of the total population, while the women made up 26.6%. In Lokichar, the men made up 26.6% of the total population, while the women were 15%.

#### **4.2.2 Marital Status of the Household Heads**

The household heads were asked to state their marital status during the interview. The data was analysed and the frequency distribution and percentages are given in Table 4.2.

**Table 4.2: Marital Status of the Household Heads**

<b>Marital Status</b>	<b>Frequency</b>	<b>Percent</b>
Married	184	79.0
Single	40	17.2
Widowed	4	1.7
Divorced	5	2.1
<b>Total</b>	<b>233</b>	<b>100.0</b>

Majority of the respondents were married, 79% of the total respondents. Marital status could provide an understanding into the factors that influence the wellbeing of the individuals who have been affected by the oil drilling activities in Lokichar.

#### **4.2.3 Household Numbers**

The household heads were asked to state the number of people residing within their homestead and the results are summarized in Table 4.3.

**Table 4.3: Household Numbers**

<b>Number</b>	<b>Frequency</b>	<b>Percent</b>
1.00	37	15.9
2.00	14	6.0
3.00	66	28.3
5.00	73	31.3
7.00	17	7.3
8.00	14	6.0
9.00	7	3.0
10.00	5	2.1
<b>Total</b>	<b>233</b>	<b>100.0</b>

Mean 4.17±.152, median 3, mode 5, Std. dev 2.32, Min 1, Max 10, range 9

The study found out that 49.7% of the households had more than four (4) members living within their households. Households with only one household member were 15.9%, these are Turkana's born outside the County but have now immigrated to the area because of increased opportunities arising from the oil drilling. The group is normally referred to as "ichakun" in turkana.

#### **4.2.4 Highest Education Level Attained by the Respondents**

The respondents were asked to state the highest level of formal education they attained and the results were summarized in Table 4.4.

**Table 4.4: Highest Level of Formal Education Attained by the Household Head**

<b>Level of Formal Education</b>	<b>Frequency</b>	<b>Percent</b>
Never went to School	73	31.3
Lower Primary (1-4)	3	1.3
Upper Primary(5-8)	12	5.2
K.C.S.E (Form4)	36	15.5
A Level	7	3.0
PI Teacher	17	7.3
College(Diploma)	47	20.2
Undergraduate Degree	34	14.6
Masters and above	4	1.7
<b>Total</b>	<b>233</b>	<b>100.0</b>

The majority of respondents that is, 31.3% had never attended any formal school. A significant percent (20.2 %) of the household heads had attended college and obtained a Diploma.

#### **4.3 Household Socioeconomic Wellbeing in Lokichar Location**

The dependent variable for this study was the socioeconomic wellbeing of the households. The variable was operationalized as an index involving eight main indicators which included: (i) improved standard of living, (ii) good health, (iii) safety, (iv) improved social relations, (v) improved spiritual fulfilment, (vi) state of personal environment, (vii) emotions and affiliations, and (viii) achievement in life.

The eight main indicators each had statements that described them, these formed 32 statements in total. These statements were scored by the respondents on a 10-point rating scale. The scale ranged from 0 (not assisted in the life of the respondent to 10 (extremely assisted the respondent) as indicated in the questionnaire (Appendix A). The scores for each indicator were added together and a mean calculated. Then all the scores for all the indicators were added together to form an index of socioeconomic wellbeing of the households found near the oilfields in Lokichar location. The internal reliability of the created socioeconomic wellbeing index using Cronbach's alpha ( $\alpha$ ) was calculated and found to be .881, which was acceptable. The 32 statements forming the main indicators their frequency distribution and their descriptive statistics are shown in Appendix D. The descriptive statistics of the main indicators for the household socioeconomic wellbeing and their reliability using Cronbach's alpha ( $\alpha$ ) are shown in Table 4.5.

**Table 4.5: Socioeconomic Wellbeing of Households in Lokichar Location**

Main Indicators and Statements	Rating by the Household Heads in Lokichar					
	Mean	Median	Mode	Std. dev	Range	Alpha
Standard of living	4.51	4.40	4.00	1.43	5.33	.834
Good health	4.80	5.00	5.00	1.93	9.00	.642
Safety	4.80	5.00	5.00	1.69	7.00	.767
Social Relations	4.57	4.83	4.00	1.82	6.67	.912
Spiritual fulfilment	5.26	5.75	5.50	1.61	6.00	.944
Environment	4.13	5.06	5.63	1.37	6.25	.892
Emotions and Affiliations	4.95	5.80	5.00	1.70	6.20	.961
<b>Socioeconomic wellbeing</b>	<b>4.79</b>	<b>4.31</b>	<b>3.00</b>	<b>1.67</b>	<b>6.69</b>	<b>.881</b>

*n*=233, 1 =Very Low and 10= Very High.

The mean for the household socioeconomic wellbeing index was  $4.79 \pm .106$ , while the median was 4.31 and mode 3. The variation was low (standard deviation 1.67).

The index of household socioeconomic wellbeing developed from the 32 indicators was grouped into five (5) categories in order to indicate the level of socioeconomic wellbeing as follows: 1.0 – 2.99 Very Low; 3.0 – 4.99 Low; 5.0 – 6.99 Moderate; 7.0 – 8.99 High; 9.0 – 10.0 Very High.as shown in Table 4.6.

**Table 4.6: Socioeconomic Wellbeing of Households in Lokichar Location**

Wellbeing Categories	Frequency	Percent
1-2.99 (Very Low)	-	-
3- 4.99 (Low)	159	68.2
5.0-6.99 (Medium)	42	18.0
7.0-8.99 (High)	27	11.6
9.0-10.0 Very High)	5	2.1
<b>Total</b>	<b>233</b>	<b>100.0</b>

The mean of the socioeconomic wellbeing of the community was 4.79 (Low Level) and ranged from 2 (Very low) to 9.28 (Very High). The differences in the distribution of the households into the different categories was determined using the Chi-square test and the results are shown in Table 4.7.

**Table 4.7: Chi-square test for the Household's Socioeconomic Wellbeing**

Categories	Observed n	Expected n	Residual	Statistics
1-2.99	-	-	-	
3-4.99	159	58.3	100.8	$\chi^2 = 244.23$
5-6.99	42	58.3	-16.3	$df= 3,$
7-8.99	27	58.3	-31.3	$p = .001$
9-10	5	58.3	-53.3	
<b>Total</b>	<b>233</b>			

The Chi-square test revealed that there were significant differences among the five categories. The category of Low was found to be significantly ( $\chi^2 = 244.23$ ,  $df = 3$ ,  $p < .001$ ) higher than the other categories. This meant that community households were mainly having a wellbeing level of between 3 and 4.99.

#### **4.4 Influence of Corporate Social Responsibility on Household Socioeconomic Wellbeing**

The first objective of this study was: to assess the influence of oil firm's Corporate Social Responsibility (Education, Health provision, Water projects, Community Empowerment, employment opportunities) on the socioeconomic wellbeing of the households around the oil wells in Lokichar location of Turkana County.

##### **4.3.1 Corporate Social Responsibility**

The variable Corporate Social Responsibility was operationalized as an indicator which was composed of eight indicators. The eight indicators included: the contracts

given by the oil firm, educational scholarships, and bursary fund for community, water projects, employment and community social projects (social halls, roads, and dispensary). The household heads were asked to state the different benefits they had received from the oil firm. The household responses were then scored using a 0, 1 variable or dummy variable, where the positive answers were given a score of 1 and the negative ones a score of 0. The scores were then added together to form the index of oil firm corporate social responsibility. The resulting index, its descriptive statistics and frequency distribution are given in Table 4.8.

**Table 4.8: Activities Undertaken by the Oil firm as Corporate Social Responsibility**

<b>Number of CSR Activities</b>	<b>Frequency</b>	<b>Percent</b>
1.00	40	17.2
2.00	14	6.0
3.00	16	6.9
4.00	44	18.9
5.00	56	24.0
6.00	34	14.6
7.00	19	8.1
8.00	10	4.3
Total	233	100.0

Mean 4.08±.163, Median 5, Mode 5, Std. Dev 2.49, Minimum 0, and Maximum 9.

The results show that the activities of the oil firm social responsibility was not done uniformly among the community members as the households experienced between 1 and 9 activities related to CSR. The households that had received only one benefit from the CSR activities accounted for 17.2 %, while 24 % had received 5 benefits.



**Figure 4.1: Community members converging at Tullow CSR water point in Kapese Sub Location**

Source: Field primary research data, 2018

#### **4.3.2 Influence of Corporate Social Responsibility on the Socioeconomic Wellbeing of the Community**

The first research question for this study was stated as follows: how does the oil firm's Corporate Social Responsibility (education, health provision, water projects, community empowerment, and employment opportunities) influence the wellbeing of households around the oil fields in Lokichar location?

Bivariate linear regression analysis was used to determine the influence of the oil firm's Corporate Social Responsibility (education, health provision, water projects, community empowerment, and employment opportunities) on the wellbeing of local community in Lokichar Location. The corporate social responsibility formed the

independent variables while the socioeconomic wellbeing formed the dependent variable. The results of the regression model are presented in Table 4.9.

**Table 4.9: Regression Model Summary for Corporate Social Responsibility and Socioeconomic Wellbeing of Households in Lokichar Division**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.131 <sup>a</sup>	.171	.131	56.35

The model indicates an adjusted  $R^2$  value of 0.13; this means that the independent variable corporate social responsibility explained approximately 13 % of the variation in dependent variable index of socioeconomic wellbeing of the households in Lokichar Division. The statistical significance for the whole regression model was determined using the  $F$  test and the results are presented in Table 4.10.

**Table 4.10 Statistical Significance of the Regression Model using the  $F$  Test**

	Sum of Squares	df	Mean Square	$F$	$p$
Regression	239.972	1	239.972	3.798	.063
Residual	14594.883	231	63.181		
Total	14834.855	232			

The results of the  $F$  test for the whole regression model is not statistically significant,  $F(1, 231) = 3.798$ ,  $p = .063$  indicating that there is no statistically significant linear relationship. Corporate social responsibility cannot statistically significantly predict the household socioeconomic wellbeing of the households in Lokichar location. The coefficients for the regression model are given in Table 4.11.

**Table 4.11: Regression Coefficients for the Bivariate Relationship between Corporate Social Responsibility and Wellbeing of the Households**

Model	Unstandardized	Standardized	<i>t</i>	<i>p</i>	Collinearity	
	Coefficients	Coefficients				
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		<b>VIF</b>	
(Constant)	47.990	7.279		6.593	.000	
Corporate Social Responsibility	2.993	1.514	.131	1.976	.079	1.000

The regression analysis indicates that corporate social responsibility had no significant influence ( $\beta = .131$ ,  $p = .079$ ) on the wellbeing of the households in Lokichar location. Therefore it can be concluded that corporate social responsibility of the oil firm had no statistical significant influence on the community.

#### **4.4 Environmental Pollution and Wellbeing of the Community**

The second objective of this study was stated as: to establish the influence of environmental pollution from oil firms on the socioeconomic wellbeing of the households around the oil fields in Lokichar Location.

##### **4.4.1 Environmental Pollution**

The environmental pollution arising from oil drilling activities was operationalized as an index, which combined four indicators change in the condition of vegetation, destruction of natural resources such as soils and livestock diseases associated with mining. The perceptions of the household heads were recorded on a 3 point scale based on how they perceived the destruction by oil firm drilling activities. A score of 3 was given for high effects and 0 for no effect. The scores were then added together to form the index whose descriptive statistics and frequency distributions are given in Table 4.12.

**Table 4.12: Index of Environmental Pollution Arising from Oil firm Activities**

	<b>Frequency</b>	<b>Percent</b>
3.00	43	18.5
4.00	54	23.2
5.00	33	14.2
6.00	103	44.2
<b>Total</b>	<b>233</b>	<b>100.0</b>

Mean 4.06  $\pm$ .075, median 4, mode 3, Std. dev 1.15, minimum 3, maximum 6, range 3

The index ranged between 3 and 6 and had a mean of 4.06, indicating high effects.

The majority (44.2 %) of the households indicated that the oil firm had influence on the natural environment was high (level of 6).

#### **4.4.2 Influence of Environmental Pollution on the Wellbeing of the Households**

The research question associated with this objective was stated as: How does environmental pollution from oil firms influence the wellbeing of the local community in Lokichar Location.

Bivariate linear regression was used to determine the influence of pollution on the wellbeing of the community living in Lokichar location. Environmental pollution formed the independent variables while the socioeconomic wellbeing formed the dependent variable. The results of the regression model are presented in Table 4.13.

**Table 4.13: Regression Model between Environmental Pollution and Wellbeing of the Households**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	.159 <sup>a</sup>	.38	.31	56.11649

The model indicates an adjusted  $R^2$  value of 0.31; this means that the independent variable environmental pollution explained approximately 31 % of the variation in dependent variable socioeconomic wellbeing of the Lokichar households. The statistical significance for the whole regression model was determined using the  $F$  test and the results are presented in Table 4.14.

**Table 4.14: Statistical Significance of the Regression Model using the  $F$  Test**

	Sum of Squares	$df$	Mean Square	$F$	$p$ .
Regression	359.032	1	359.032	5.729	.017
Residual	14475.823	231	62.666		
Total	14834.855	232			

The results of the  $F$  test for the whole regression model is statistically significant,  $F(1, 231) = 5.729$ ,  $p = .017$  indicating that there is a statistically significant linear relationship. Environment pollution statistically significantly predicts the socioecological wellbeing of the women entrepreneurs. The coefficients for the regression model are given in Table 4.15

**Table 4.15: Regression Coefficients for Environmental Pollution and Wellbeing of the Households**

Model	Unstandardized Coefficients	Standardized Coefficients				Collinearity Statistics
	<b>B</b>	Std. Error	<b>Beta</b>	$t$	$p$	<b>VIF</b>
(Constant)	28.240	13.814		2.044	.042	
Environmental Pollution	-7.884	3.268	-.359	2.412	.017	1.000

The regression analysis indicates that environmental pollution from the activities of the oil firm had a negative and significant influence ( $\beta = -.359$ ,  $p = .017$ ) on the

socioeconomic wellbeing of the households in Lokichar location. Therefore it can be concluded that pollution from oil firm activities influences socioeconomic wellbeing of the households negatively.

#### **4.5 Land Acquisition and Socioeconomic Wellbeing**

The third objective of this study was to analyze the effects of land acquisition by oil firms on the socioeconomic wellbeing of the households around the oil fields in Lokichar Location.

##### **4.5.1 Land Acquisition for Oil Activities**

Land acquisition is a major problem related to oil drilling in Lokichar location of Turkana County. The independent variable was operationalized as an index consisting of three variables: involuntary land acquisition, land ownership and if the land owners were given time to relocate. The respondents were asked to score these two statements on a 0, 1-score, 0 for not true and 1 for true for the statement. The scores were summed up to form the index of involuntary land acquisition, whose descriptive statistics and frequency distribution is given in Table 4.16.

**Table 4.16: Index for Involuntary Land Acquisition**

<b>Scale</b>	<b>Frequency</b>	<b>Percent</b>
1.00	159	68.2
2.00	21	9.0
3.00	53	22.7
<b>Total</b>	<b>233</b>	<b>100.0</b>

Mean 1, mode 1, median 1, Std. dev .840, minimum 1, and maximum 3

The majority (68.2 %) of the households had a score of 1, meaning they were evicted from their ancestral land. The remaining 31.8 % were not only evicted but their eviction was accompanied with loss of land and lack of a notice to vacate.

#### **4.5.2 Influence of Involuntary Land Acquisition on the Wellbeing of the Households**

The third research question of this study was: what is the influence of involuntary land acquisition to the socioeconomic wellbeing of the households around the oil fields in Lokichar location? To answer this question a simple linear regression analysis was performed.

Linear regression analysis was used to determine the effects of involuntary land acquisition on the wellbeing of the households around the oil fields in Lokichar location. The index of household socioeconomic wellbeing formed the dependent variable, while the index of involuntary land acquisition the independent variable. The results of the regression model are presented in Table 4.17.

**Table 4.17: Regression Model Summary for the Involuntary Land Acquisition**

<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
.167 <sup>a</sup>	.528	.524	1.74951

The model indicates an adjusted  $R^2$  value of 0.524; this means that the independent variable involuntary land acquisition explained approximately 52 % of the variation in dependent variable socioeconomic wellbeing of the Lokichar households. The statistical significance for the whole regression model was determined using the  $F$  test and the results are presented in Table 4.18.

**Table 4.18: Regression for the Model between Involuntary Land Acquisition and Socioeconomic Wellbeing of Households in Lokichar Location**

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Regression	359.032	1	359.032	5.729	.017
Residual	14475.823	231	62.666		
Total	14834.855	232			

The results of the *F* test for the whole regression model was found to be statistically significant,  $F(1, 231) = 5.72$ ,  $p = .017$  indicating that there is a statistically significant linear relationship. Involuntary land acquisition statistically significantly predicts the socioeconomic wellbeing of the households in Lokichar. The coefficients for the regression model are given in Table 4.19.

**Table 4.19: Regression Coefficients for involuntary Land Acquisition**

	Unstandardized Coefficients		Standardized Coefficients		
	<b>B</b>	Std. Error	Beta	<i>t</i>	<i>p.</i>
(Constant)	3.035	.137		22.201	.000
Land Acquisition	-.353	.137	-.567	-2.582	.010

The regression analysis indicates that involuntary land acquisition from the households had a negative and significant influence ( $\beta = -.567$ ,  $p = .010$ ) on the socioeconomic wellbeing of the households in Lokichar location. Therefore it can be concluded that the households that had undergone involuntary land acquisition experienced low or negative socioeconomic wellbeing.

## CHAPTER FIVE

### DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents and discusses the results of this study based on formulated objectives and study questions as presented in Chapter One. The study investigated the effects of drilling of oil on the socio-economic wellbeing of Turkana community. Both descriptive and inferential statistics were used in the analysis of the study. The results of findings are discussed in relation to other studies as given in the following sections. The chapter is divided into nine sections, as follows: Characteristics of the respondents, wellbeing of the respondents, effects of oil drilling on the socio-economic wellbeing of the Turkana community.

#### 5.2 Discussions

##### 5.2.1 Characteristics of the Households Around the Oil fields in Lokichar Location

###### *Socio-economic Wellbeing of the Turkana Community*

The Chi-square test revealed significant differences among the categories. The category of low was found to be significantly ( $p < .001$ ) higher than the other categories. This meant that community households were mainly having a wellbeing level of between 3.0 and 4.99 categorized as low.

According to Muktu (2014) communities in Lokichar remain so marginalized that schools are not only ill equipped, they are quite far forcing residents to give up on education. This coupled with the high rates of poverty almost make education a legend. However, it is important to note that 20.2% of the respondents had attained a diploma, which means that the inaccessibility of education and culture that promotes early marriage and increased school drop outs is slowly changing so that the

community members can now not only pursue a college degree but also a university degree.

### **5.2.2 Effects of Corporate Social Responsibility Activities by the Oil Companies**

The regression analysis indicates that corporate social responsibility had no significant influence on the wellbeing of the households in Lokichar location. Therefore it can be concluded that corporate social responsibility of the oil firm had no statistical significant influence on the community.

These results are in line with a study by Njinu (2008) which showed that the nature of social responsibility is often such that it has little to no impact to the rural, marginalized population. This is in addition to the help being unequally distributed, a fact which translates to the majority of the community not being affected at all. Most of the companies engage in CSR as one off activity rather than a process for enhancing behavioral change. The result is that there is very little that is felt in terms of efficiency and effectiveness.

### **5.2.3 Influence of Environmental Pollution on the Socioeconomic Wellbeing of the Households in Lokichar Location**

The regression analysis indicates that environmental pollution from the activities of the oil firm had a statistical significant negative influence on the socioeconomic wellbeing of the households in Lokichar location. Therefore it can be concluded that pollution from oil firm activities influences socioeconomic wellbeing of the households negatively.

According to Mkutu (2014) wellbeing of the community neighbouring can be affected from two angles. The first is direct pollution, which in turn affects the individuals who either live or are located near the oil field. This includes contamination of both water and soil around the area. The second is indirect pollution, where residents come into

contact with matter that has been contaminated by the companies including the air that is around the processing wells and the noise pollution all of which decrease the health and happiness of the residents.

#### **5.2.4 Influence of Involuntary Land Acquisition on the Socioeconomic Wellbeing of the Households in Lokichar Location**

The findings of this study indicated that involuntary land acquisition had a negative statistical significant influence on the wellbeing of households in Lokichar location.

The majority of the respondents observed that exploration results in displacement of settled communities which leads to communities losing their land and also their livelihoods and that involuntary resettlement can be particularly disastrous for indigenous communities with strong cultural and spiritual ties to their lands who may find it difficult to survive when these are broken. This was as a result of their experiences in terms of being displaced from their ancestral land where they associate the land and its location with spiritual ties. This concurs with past studies that revealed that exploration activities and indeed mining, displaces people from their lands to create room for mining and other exploration related activities. Land in Kenya is a sensitive issue and any involuntary resettlement can be particularly disastrous for indigenous communities with strong cultural and spiritual ties to their lands and this could spark some resistance.

### **5.3 Summary of Key Findings**

The recent discovery of oil in Turkana County in Kenya has brought to the forefront the plight of the Turkana people, a marginalized pastoralist group in semi-arid northwestern Kenya. Oil discovery has ignited considerable new-found interest in this neglected region by nonlocal Kenyan and foreign actors.

Oil exploration concessions in marginalized areas are given without consulting the local inhabitants whose lives are tied to the land. The local communities mostly had no prior knowledge about land and mining rights sales; they had no knowledge of which company received the exploration license and contracts. Yet, they had to give up their grazing lands and ancestral shrines to create a right of way for oil drilling and pipelines. Those multinationals will control almost exclusively both the exploration and active drilling.

Communities can receive compensation and substantial flows of revenue when a large exploration project is established, which can act as an important catalyst for change and growth. For Turkana, an area previously peripheral to the hard economy, these monetary flows can transform the economic and social basis of the marginalized communities around the projects. The types of payments and the way they are used are key to mining's ability to contribute to sustainable development at the community level.

#### **5.4 Conclusions**

- (i) CSR activities carried out by the oil companies have no significant influence on the socioeconomic wellbeing of the communities living around the oilfields in Lokichar location.
- (ii) Environmental pollution by the oil companies is quite extensive and because of the extensive nature of pollution, pollution has a significant effect in influencing the wellbeing of the households.
- (iii) Land acquisition has had a negative influence on the socioeconomic wellbeing of the households around the oilfields in Lokichar Location

### **5.5. Recommendations**

- (i) There needs to develop a set of policies which make CSR activities uniform. Companies do only the bare minimum which in turn has little to no effect on the community. Instead the focus should be directed at equitable and efficient distribution of CSR.
- (ii) Although land acquisition has remained calm and efficient with proper compensation, it is important to educate the community on the need of professional valuing before signing any contracts for sale of land.
- (iii) Environmental conservation should remain at the forefront of all companies. All steps must be taken to secure the environment and combat the effects of oil drilling and processing.

### **5.3. Further Areas of Study**

- (i) The effectiveness of the compensation system in Lokichar
- (ii) Effect of the oil drilling on the culture of the residents of Lokichar
- (iii) Influence of oil on the environmental health of the Lokichar community

## REFERENCES

- Auty. (2001). *Sustaining Development in Mineral Economies: The Resource Curse Thesis*. London: Routledge.
- Barbier, E. (2005). *Natural Resources and Economic Development*. Cambridge: Cambridge University Press.
- Bayode, O. A. (2011). Environmental implications of Oil Exploration and Exploitation in the Coastal Region of Ondo State, Nigeria: A regional planning Appraisal. *Journal of Geography and Regional Planning Vol. 4(3)*, 110-121.
- Birdsall, N. P. (2000). *Natural Resources, Human Capital, and Growth. Working paper, Carnegie Endowment for International Peace*. Washington DC.
- Bryman. (2004). *Social Research Methods*. Oxford University Press.
- Carroll. (1991). The pyramid of corporate social responsibility. *Business horizons*, 39-48.
- CIC. (2005). *Armed violence and poverty in northern Kenya. A case study for the armed violence and poverty initiatives*. Bradford: Bradford University.
- Cohen, M. a. (2000). *Research Methods in Education*. London: Oxford university Press.
- Collier. (2006). *"Is Aid Oil? An Analysis of Whether Africa Can Absorb More Aid."*. Oxford: Oxford University Press.
- Collier, P. (2007). *The Bottom Billion. Why the poorest countries are failing and what can be done about it*. Oxford: Oxford University Press.
- Constantaras, E. (2014). *Environmental-impact-of-oil-drilling-a-mystery-to-citizens-and-civil-society/DFID(2013) World Bank grant*.
- Cordaid. (2015). *Oil exploration in Kenya: Success requires consultation*. Nairobi, Kenya.
- Crosby, P. (2009). *Quality is free: The art of industry*. New York: McGraw-Hill.
- Dahlrud, A. (2008). *corporate social responsibility and Environmental management. How corporate social responsibility is defined*.
- Department of Livestock Turkana. (2014). *Turkana Livelihoods and Value chains*.
- Diener, E. P. (1991). *Happiness is the frequency, not the intensity, of positive versus negative affect*. New York.

- Douglas, O. (2004). *Environmental Security in the Niger Delta*. Port Harcourt: Centre for Advanced Social Sciences.
- Elsbach. (1994). Acquiring organizational legitimacy through illegitimate acts. *Academy of management*.
- Ertel & Ugochukwu. (2008). Negative impacts of oil exploration on biodiversity management in the Niger. *Impact Assessment and project Appraisal*, 139-147.
- Ertel, Collins Ugochukwu & Dr. (2008). *Negative impacts of oil exploration on biodiversity management in the Niger De area of Nigeria, Impact Assessment and Project Appraisal*.
- Field E. (2005). Property rights and investment in urban slums. *journal of the European economic association*.
- Fishers et al. (1991). *Handbook for family planning operations research design*. New York: Population Council.
- Friends Of Lake Turkana. (2016). *Oil exploration and environment in Turkana*. Friends of Lake Turkana.
- Huppert, F. (2009). Psychological well-being: Evidence regarding its causes and evidences. *Applied psychology*, 137-164.
- Kahneman, Diener, & Schwarz. (1999). *Well-being: The foundations of hedonic psychology*. New York: Russell Sage Foundation.
- Karl, T. (2004). Oil-led development: social, political, and economic consequences. *Encyclopedia of energy*, 4, 661-672.
- KCSPOG. (2014). *Setting the Agenda for the Development of Kenya's Oil and Gas Resources: The perspectives of Civil Society*.
- Kerlinger & Lee. (2000). *Foundations of Behavioural Research*. Fort Worth: Harcourt College Publishers.
- Lund-Thomson. (2005). "Corporate accountability in South Africa: The role of community mobilizing in environmental governance". *Journal of international affairs*, 619-633.
- Marks, T. a. (2008). *Measuring well-being in policy: issues and applications*.
- McGaghie. (2001). *Problem statement conceptual framework and research question*.
- Mkutu Agade, K. (2004). 'Ungoverned Space 'and the Oil Find in Turkana, Kenya. *The Round Table*, 103(5), 497-515.
- Mugenda & Mugenda. (1999). *Research methods; Quantitative and Qualitative approaches*. Nairobi, Kenya: ACTS Press.

- Mutai. (2000). *How to right quality research proposal. a complete and simplified recipe*. New York: Thelley Public Citations.
- Nanok. (2017). *A Socio-economic and environmental analysis of the effects of oil exploration on the local community in Lokichar Turkana County*. Nairobi: Strathmore University.
- Nsubuga. (2000). *Fundamentals of Educational Research*. M.P Uganda.
- Nwoko, C. (2014). *Assessing the Socio-economic Impacts Arising from Oil Pollutions in the Niger Delta Region of Nigeria*. *Environmental Law and management papers*.
- Omorede, C. (2014). Assessment of the Impacts of Oil and Gas Resource Exploration on the Environment of selected communities in Delta State, Nigeria. *International Journal of Management ,Economics and Social Sciences*, 3,79-99.
- Ormrod. (2005). *Practical Research : Planning and Design*. Upper Saddle River, N.J.: Prentice Hall.
- Pantuliano, S. (2010). Oil, land and conflict: The decline of Misseriyya pastoralism in South Sudan. *Review of African political economy*, 37, 7-23.
- Patey, L. (2014). *An African Oil Upstart in Transition*. Oxford institute for Energy Studies.
- Pedersen. (2006). *Making Corporate Social Responsibility operable: How companies translate stakeholders dialogue into practice*. Malden: Blackwell Publisher.
- Prieto, M. (2006). Critical Perspectives on CSR and Development. *Intenationa Affairs*.
- Pritchett, L. (2000, May 2nd ). Understanding patterns of Economic Growth: Searching for Hills among plateaus, Mountains, and Plains. *The Worldbank Economic Review*, pp. 221-250.
- Rodrigues, B. a. (2006). Corporate Social Responsibility and Resource-based perspectives. *Journal of business ethics*, 2, 111-132.
- Rodrik, D. (1999). Where Did All the Growth Go? External Shocks, Social Conflicts, and Growth Collapses. *Journal of Economic Growth*, 4 (4) :385-412.
- Ross. (1999). The Political Economy of the Resource Curse, World politics. In *World politics* (pp. Vol. 51 (297-322)).
- Sachs, J. &. (1995). *Natural Resource Abundance and Economic Growth Development discussion paper 517a*. Cambridge: Havard institute for International Development.

- Sala-i-Martin, Xavier & Arvind Subramanian. (2003). *Addressing the Natural Resource Curse: An illustration from Nigeria*. NBER Working paper no. 9804. Cambridge, MA.: The National Bureau of Economic Research.
- Sayne, A. A. (2015). *Inside NNPC Oil Sales: A Case for Reform in Nigeria*. Natural Resource Governance Institute.
- Siegle, J. (2008). Governance Strategies to Remedy the Natural Resource Curse. *International Social Science Journal*, 57:45-55.
- Smith & Craig. (2003). *Corporate Social Responsibility: Not whether but how?* London: London business School.
- Solis. (2010). *Exploring and defining influence*. Retrieved 12 12, 2012, from [Http://www.Briansolis.com/2010/09/exploring -and- defining- influence-A-New-Study/](http://www.Briansolis.com/2010/09/exploring-and-defining-influence-A-New-Study/)
- Stuart Leavenworth and Kiki Zhao. (2016). All land in China is owned by the government, which parcels it out to developers and homeowners through 20- to 70-year leases. *New York times*.
- Trochim & Donnelly. (2008). *The research Methods Knowledge Base*. Meson OH: Cengage Learning.
- Tullow . (2015). *Tullow in Kenya*. Nairobi: Tullow kenya B.V.
- Tullow. (2012). *Tullow CSR report for Gabon, Equatorial guinea, Ivory coast and congo*.
- Tullow. (2014). *Tullow in Kenya; Tullow Kenya Profile*. NAIROBI.
- Tullow Oil. (2015). *Social Investment*. Nairobi: Tullow Kenya BV.
- UNCTAD, 2007. *Transnational Corporations, Extractive Industries and Development, World Investment Report*. United Nations Conference on Trade and Development (UNCTAD), Geneva.
- UNEP. (2011). *Environmental Impact Assessment of Ogoni land*.
- Vinit Mehta. (2018). *Types of Environmental Pollutions and their harmful effects*.
- William Harrah Collage. (2016). *The effects of corporate social responsibility on employee wellbeing in hospitality industry*. Las Vegas: Emerald Publishing Limited.
- Zerihun. (2014). *The Natural Resource Curse in Sub-Saharan Africa: Transparency and international Initiatives. Dessertations: Open Access, The Aquila Digital Community*.

## APPENDICES

### APPENDIX A: HOUSEHOLD QUESTIONNAIRE

My name is Francis Ekaale, conducting a research study entitled “*Assessment of the Influence of Oil Drilling on the Wellbeing of the Local Community in Lokichar Location, Turkana County, Kenya.*” You have been identified and selected as a key person for this study. The purpose of this questionnaire is to request you to participate in this study by providing information sought. The information obtained is strictly for academic purpose and shall be treated with utmost confidentiality.

#### Instructions

Please answer all questions appropriately and tick () all that apply

#### Part I: Demographic Information

Sub Location: Lokichar [  ] Kapese [  ]

Gender: Male [  ] Female [  ]

Age: \_\_\_\_\_

Marital Status: \_\_\_\_\_ (Married/ Single/ Widowed/ Divorced/

Ethnicity: \_\_\_\_\_

Household number: \_\_\_\_\_

Number of children: Boys \_\_\_\_\_ Ages \_\_\_\_\_

Number of children: Girls \_\_\_\_\_ Ages \_\_\_\_\_

Number of adults: men \_\_\_\_\_ age \_\_\_\_\_

Number of adult: women \_\_\_\_\_ ages \_\_\_\_\_

Education level: Kindly indicate your highest and partner’s academic qualification

Highest Academic Level	Myself	Partner
Never went to school		
Lower primary (1-4)		
Upper primary (5-8)		
K.C.S.E (Form 4)		
‘A’ Level		
P1 Teacher		
College (Diploma)		
Undergraduate Degree		
Masters and above		
Other (Specify)		

Professional training: \_\_\_\_\_

Source of Income (Livelihood): [  ] Nomadic Pastoralist [  ] Formal Employment [  ]

Casual Laborer [  ] Business Trader [  ] any other specify

Residence (homestead):

Ownership of house: \_\_\_\_\_ (own house/ rental house)

Type of house:

Material used: \_\_\_\_\_ (wooden, mud, stone)

Number of rooms: \_\_\_\_\_

Distance from town: \_\_\_\_\_

### **Corporate Social Responsibility**

Has any member of your household ever got a contract from oil firm?

If yes, how many contracts has your household received so far?

What was the amount received from the contracts?

Has any member of your household ever been offered a scholarship by the oil firm?

If yes, how many members have so far received the scholarship?

How much was the scholarship worth?

Are there any projects implemented by oil firms in your village?

If yes, how many projects are within your locality?

What is the amount spent by the company on the projects?

Do you think these projects impact on your lives?

Has any member of your family ever benefited from bursary from oil firms?

If yes, how many members have so far benefitted?

What was the amount received from the bursary?

### **Environmental Pollution**

Have you experienced loss of livestock due to increased traffic from oil drilling activities?

If yes, how many livestock?

How much was the loss equivalent to?

Have disease outbreaks cases in this area increased due to oil drilling?

If yes, how many disease outbreaks have you experienced so far?

How many livestock died?

Has oil drilling brought any change to your vegetation cover?

If yes, state the number of livestock affected.

Explain the nature of the change.

Has rain pattern in your area been affected by oil drilling?

How many rain seasons did your area initially have before oil drilling began?

How many rain seasons do you experience now?

Is the current rain season predictable?

**Land Acquisition**

Do you own land here?

If yes, what quantity of land do you own?

Were you forcefully evicted from your ancestral land by oil drilling firm?

Were you given some time to relocate?

If yes, how long?

Was this time sufficient?

How is the price of land in your area now as compared to before oil drilling activities began?

How much was a 50 by 100 plot in your area before oil drilling began?

How much is a 50 by 100 plot at the moment?

Did you receive any compensation for the land you lost to the oil firm?

If yes, after what period of time from the notice date?

How much was the compensation?

Was the compensation proportionate with what you had invested in the land?

**Wellbeing of the people**

**Has the oil drilling project assisted you in any of the following? If it has, rate the assistance on a scale of 0 not assisted /contributed to 10 highly assisted / contributed.**

<b>Statement</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<i>Has the oil drilling project assisted you in the following</i>	<b>Not assisted / contributed</b>										<b>Highly Assisted / Contributed</b>
<b><i>1.Improved your standard of living (Material Provision)</i></b>											
Food,											
Shelter,											
Clothing											
Capital											
Provision of Assets											
Work (paid labour, employment)											
<b><i>2.Assisted in your health (Good Health)</i></b>											
Provision of health services											
Cost of health services											
<b><i>3.Made you to feel safer (Safety)</i></b>											
Peace of mind											
Absence of constant fear											
Absence of constant worry											
<b><i>4.Improved your Social Relations</i></b>											
Good relations with family											
Good relations with community,											
<b><i>5.Assisted in your Spiritual Fulfillment</i></b>											
Belief in God											

Attendance to Worship areas (Church, Mosque, Shrines)												
<b>6. Assisted you in Controlling the State of your Environment</b>												
Ability to Control Political situations												
Ability to Control Physical situations (Material situations)												
Ability to Acquire Services												
Ability to Acquire Resources												
Ability to Acquire Skills,												
Ability to Acquire Knowledge,												
Ability to Acquire Loans												
Ability to Acquire Information												
<b>7. Assisted in your Emotions and Affiliations</b>												
Social Respect												
Being part of the Community												
Fulfill Social Obligations												
Listened to by others												
Help Others												
<b>8. Life achievement (what you are achieving in life)</b>												

**APPENDIX B: FOCUS GROUP DISCUSSIONS GUIDE**

**The following are the questions which you are required to talk about in this forum.**

1. Do you know what CSR by oil companies is all about?
2. Do company representatives consult you before implementing any CSR project?
3. Has CSR improved your living standards in any way?
4. In order of priority, what are the two things that can be done to ensure that the community realises the maximum benefits from oil activities? Start with the most significant.
5. How has land acquisition by oil firm influenced your lives?
6. Has anyone whose land was taken been compensated by the oil firm?
7. How has provision of education by oil firm influenced your lives?
8. What has Tullow done to better education in this area?
9. How has environmental pollution from oil firms influenced your livelihoods?
10. What are some of the environmental concerns attributed to oil drilling?

## **APPENDIX C: QUESTIONNAIRE FOR EMPLOYEES (Key Informant Interview)**

My name is Francis Ekaale, conducting a research study entitled “*Assessment of the Influence of Oil Drilling on the Wellbeing of the Local Community in Lokichar Location, Turkana County, Kenya*” You have been identified and selected as a key person for this study. The purpose of this questionnaire is to request you to participate in this study by providing information sought. The information obtained is strictly for academic purpose and shall be treated with utmost confidentiality.

### **Part I: Demographic Information**

Kindly respond by ticking (√) where appropriate.

1. Age: 20-30 years [ ] 31-40 years [ ] 41-50 years [ ] Over 51 years [ ]
2. Gender: Male [ ] Female [ ]
3. What is your level of education? Diploma level [ ] Degree level [ ] Masters [ ] O-level [ ] none [ ] other specify.....
4. Working experience: Less than 5 years [ ] between 6-10 years [ ] between 11-15 years [ ] Over 15 years [ ]

#### **a) Interview guide for Tullow oil CSR Manager**

1. Through the CSR, what are the benefits that the local community in Lokichar Location has realised as a result of Tullow Oil activities in the region?
2. Looking at the past of Lokichar Location which is characterised by high poverty, illiteracy and marginalization by successive Kenyan governments, how has Tullow Oil CSR impacted specifically on the community’s Wellbeing? How sustainable are these impacts?
3. What are some of the CSR projects implemented in Lokichar Location touching on the following;
  - Health
  - Water
  - Community empowerment
  - Education
  - Employment opportunities
4. What are the two most important things that you can do to ensure that the community enjoy the maximum benefits offered by the company’s CSR and realise sustainable development?

**b) Interview guide for Tullow Oil Land Resettlement Manager**

1. Having in mind that land is such an emotive issue in Kenya and Turkana County's land is managed as Community trust land, kindly tell me how Tullow oil procured the land issue with the defunct municipal council in the county.
2. Approximately how much land so far is under operations by Tullow oil?
3. Have all the displaced individuals been satisfactorily compensated? Please explain.
4. How did the transition from the previous centralised government to the current devolved system of government affect your operations with regard to land compensation process? Were there claims for any further/additional land payments by the county government compared to your initial agreement with the defunct Turkana Municipal Council? How did you manage the situation?
5. How long did it take for you to compensate the victims of land displacement in Lokichar?
6. How long was the notice you gave to the victims?
7. Do you think the time was appropriate?

#### APPENDIX D: TULLOW COMPLETE CSR PROJECTS BY 2015

Project Name	Focus Area	Location	Project Description
<b>SOCIAL INFRASTRUCTURE</b>			
Uhuru High School - construction of 1x dormitory	Education	Lokichar	Infrastructure - 1x dormitory to accommodate 60 students.
Lokichar sub-county Hospital - construction of new level 3 hospital	Health	Lokichar	Infrastructure - 1x level 3 hospital, new health facility. Construction of a main referral hospital for the catchment area - approx. 39,000 people.
Kasuroi health Centre - rehabilitation & refurbishment of existing dispensary	Health	Lokichar	Rehabilitation and refurbishment of existing dispensary.
Lomokamar tree nursery project	Environment	Lokichar	Establishment of a fully operational tree nursery for the community
Tullow light vehicle lease project	Economic	Lokichar	Supply and lease of 38 light vehicles to the community
Social Investment Community Water Project (Turkana) - Lot 3	Water	Lokichar	1.Kangakimak Water Project 2.Kaputir Junction Water Project
Katilu Girls School - construction of 1x dormitory	Education	Katilu	Infrastructures - 1x dormitory to accommodate 60 students.
Kainuk Secondary School - construction of 1x dormitory	Education	Kainuk	Infrastructure - 1x classroom for 40 students & dormitory for 60 students.
Morulem Secondary School - construction of 1x science laboratory & associated equipment	Education	Lokori	Construction of science laboratory & equipping.
AIC Katilia - construction of 1x science laboratory & associated equipment	Education	Lokori	Construction of science laboratory & equipping.
Lodwar County Hospital - construction of new level 5 hospital OPD	Health	Lodwar	Construct new level 3 health facility

St Joseph's Lapur Secondary School - installation of perimeter fence	Education	Loarengak	Construction of perimeter fence around the school (400m by 400m).
Milima Tatu Secondary School - construction of 3x classrooms	Health	Kaaleng	Construction of 2x classrooms.
Lokori sub-country Hospital - construction of new level 3 hospital	Health	Lokori	Construct new level 3 health facility from scratch.
<b>Community Access to Water</b>			
Social Investment Community Water Project (Turkana) - Lot 1	Water	Kerio	1.Kerio Water Project ; 2.Lochwaarengan Water Project 3.Nakare Arengan Water Project
Social Investment Community Water Project (Turkana) - Lot 2	Water	Lokori	1.Lokori Water Project ; 2.Lotubae Girls Water Project 3.Katilia Water Project

---

*Source: Tullow report 2015*

**APPENDIX E: SOCIOECONOMIC WELLBEING OF HOUSEHOLDS IN LOKICHAR LOCATION**

Main Indicators and statements	Rating by the Household heads in Lokichar					
	Mean	Median	Mode	Std dev	Range	Alpha
<b>Standard of living</b>	<b>5.51</b>	<b>5.40</b>	<b>5.00</b>	<b>1.43</b>	<b>5.33</b>	<b>.834</b>
Food provision	6.64	7.00	7.00	1.81	6.00	
Shelter	5.96	6.00	5.00	1.86	9.00	
Clothing	5.83	6.00	7.00	1.57	5.00	
Capital	5.32	5.00	5.00	1.85	6.00	
Assets	4.75	5.00	4.00	2.10	8.00	
Work	4.55	5.00	5.00	2.32	9.00	
<b>Good health</b>	<b>5.80</b>	<b>6.00</b>	<b>6.00</b>	<b>1.93</b>	<b>9.00</b>	<b>.642</b>
Health services	6.01	6.00	6.00	2.11	9.00	
Cost of health	5.55	6.00	5.00	2.39	9.00	
<b>Safety</b>	<b>6.80</b>	<b>7.00</b>	<b>7.00</b>	<b>1.69</b>	<b>7.00</b>	<b>.767</b>
Peace of mind	6.92	7.00	7.00	1.80	7.00	
Constant Fear	6.46	7.00	7.00	2.35	8.00	
Constant Worry	7.01	7.00	7.00	1.94	8.00	
<b>Social Relations</b>	<b>6.57</b>	<b>6.83</b>	<b>5.00</b>	<b>1.82</b>	<b>6.67</b>	<b>.912</b>
With Community	6.51	7.00	9.00	2.04	7.00	
With Family	6.78	7.00	7.00	1.89	7.00	
Good Community	6.42	7.00	5.00	1.99	6.00	
<b>Spiritual fulfilment</b>	<b>7.26</b>	<b>7.75</b>	<b>8.50</b>	<b>1.61</b>	<b>6.00</b>	<b>.944</b>
Belief in God	7.08	7.50	8.00	1.66	6.00	
Worship area	7.44	8.00	9.00	1.66	6.00	
<b>Environment</b>	<b>6.13</b>	<b>6.06</b>	<b>6.63</b>	<b>1.37</b>	<b>6.25</b>	<b>.892</b>
Politics	6.28	6.00	6.00	1.81	7.00	
Physical Material	6.17	6.00	6.00	1.49	7.00	
Services	6.17	6.00	5.00	1.63	7.00	
Access to resources	6.25	6.00	5.00	1.76	7.00	
Skills	6.12	6.00	5.00	1.80	7.00	
Knowledge	6.26	6.50	5.00	1.72	7.00	
Loans	5.64	5.00	5.00	2.22	7.00	
Information	6.17	7.00	7.00	2.04	7.00	
<b>Emotions and Affiliations</b>	<b>6.95</b>	<b>6.80</b>	<b>9.00</b>	<b>1.70</b>	<b>6.20</b>	<b>.961</b>
Respect	6.89	7.00	9.00	1.88	6.00	
Part of community	6.94	7.00	9.00	1.88	6.00	
Social obligations	6.73	7.00	9.00	1.93	6.00	
Listened to	7.03	7.00	9.00	1.74	6.00	
Help others	7.17	7.50	9.00	1.74	6.00	

*n*=233, 1=Very low and 10= Very High.

**APPENDIX F: LETTER FROM THE UNIVERSITY**

**AFRICA NAZARENE**  
UNIVERSITY

19<sup>th</sup> June, 2018

**RE: TO WHOM IT MAY CONCERN**

Francis Ekaale Ekaale 16J01DMEV004 is a bonafide student at Africa Nazarene University. He/She has finished his/her course work and has defended his/her thesis proposal *entitled "Assessment of the influence of oil drilling on the wellbeing of the local community in Lokichar location, Turkana county."*

Any assistance accorded to him/her to facilitate data collection and finish his/her thesis is highly welcomed.

**Prof. Rodney Reed**  
**Deputy Vice Chancellor, Academic Affairs**

## APPENDIX G: LETTER FROM NACOSTI



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349,3310571,2219420  
Fax: +254-20-318245,318249  
Email: dg@nacosti.go.ke  
Website : www.nacosti.go.ke  
When replying please quote

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

Ref. No. **NACOSTI/P/18/82517/24748**

Date: **15<sup>th</sup> September, 2018**

Francis Ekaale Ekales  
Africa Nazarene University  
P.O. Box 53067-00200  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Assessment of the influence of oil drilling on the well-being of Turkana Community in Lokichar Location, Turkana County, Kenya”* I am pleased to inform you that you have been authorized to undertake research in **Turkana County** for the period ending **14<sup>th</sup> September, 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 Director of Education  
Turkana County.

## APPENDIX H: PERMIT FROM NACOSTI

**THIS IS TO CERTIFY THAT:** **Permit No : NACOSTI/P/18/82517/24748**  
**MR. FRANCIS EKAAL EKALES** **Date Of Issue : 15th September,2018**  
**of AFRICA NAZARENE UNIVERSITY,** **Fee Received :Ksh 1000**  
**113-30500 Lodwar,has been permitted**  
**to conduct research in Turkana County**

**on the topic: ASSESSMENT OF THE**  
**INFLUENCE OF OIL DRILLING ON THE**  
**WELL-BEING OF TURKANA COMMUNITY**  
**IN LOKICHAR LOCATION, TURKANA**  
**COUNTY, KENYA**

**for the period ending:**  
**14th September,2019**

**Applicant's**  
**Signature**

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

**THE SCIENCE, TECHNOLOGY AND**  
**INNOVATION ACT, 2013**

The Grant of Research Licenses is guided by the Science,  
 Technology and Innovation (Research Licensing) Regulations, 2014.

**CONDITIONS**

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

**REPUBLIC OF KENYA**

  
**NACOSTI**  
**National Commission for Science,**  
**Technology and Innovation**  
**RESEARCH LICENSE**

**National Commission for Science, Technology and innovation**  
 P.O. Box 30623 - 00100, Nairobi, Kenya  
 TEL: 020 400 7000, 0713 788787, 0735 404245  
 Email: dg@nacosti.go.ke, registry@nacosti.go.ke  
 Website: www.nacosti.go.ke

**Serial No.A 20668**  
**CONDITIONS: see back page**