

**INFLUENCE OF OIL EXPLORATION PROJECTS ON THE
SOCIAL/ECONOMIC DEVELOPMENT OF COMMUNITIES IN
MARGINALIZED AREAS IN KENYA: A CASE OF TURKANA
COMMUNITY.**

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DECLARATION

This research project is my original work and has not been submitted for the award of any higher learning for the award of an academic certificate.

Sign..... Date

L50/61179/2013

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This project has been submitted with my approval as University supervisor.

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DEDICATION

The project is dedicated to my Children, Laurence Kibet, Dianah Cheyech, Bernard Mwetich and my friend Victor Muriuki for their support and motivation which enabled me finalize this project.

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LIST OF ABBREVIATIONS AND ACRONYMS

GOTNCs: Globally-operating transnational corporations

CIS: Commonwealth of Independent States

CSR: Corporate Social Responsibility

BCSD: Business Council for Sustainable Development

EIA: Environmental Impact Assessment

DPR: Department of Petroleum Resources

FEPA: Federal Environmental Protection Agency

GDP: Gross Domestic Product

MNCs: Multi National Corporations

NGO: Non Governmental Organization

SPDC: Shell Petroleum Development Company

SPSS: Statistical Package for Social Sciences

PIA: Post-Impact Assessment

WBCE: World Industry Council for the Environment

ABSTRACT

Exploration projects are activities geared towards extraction of oil deposits or other minerals. In addition to economic developments, the exploration project can create new communities and bring wealth to those already in existences, though it can also cause considerable disruption. Ideally, in as much as exploration projects are of great importance to the economic developments of a nation, it however poses grave dangers to human beings living around such areas of exploration. The purpose of this study is to investigate how exploration projects influence the socio-economic development of communities in marginalized areas. The study was steered by the following objectives: to establish the influence of oil exploration activities on land acquisition among the Turkana community in Turkana County; to assess the influence of oil exploration activities on health among the Turkana community in Turkana County; to examine the influence of oil exploration activities on education among the Turkana community in Turkana County; to determine the influence of oil exploration activities on infrastructural development in Turkana County; and, to establish the influence of oil exploration activities on environmental sustainability among the Turkana community in Turkana County. In this research study, a descriptive survey study was the appropriate research design to be used. The study was conducted in Ngamia¹, Twiga, Etuko, and Ekales, Turkana County where Tullow Oil Exploration Company is located. The study area has 30 villages and 170 households with four different communities cohabiting together. The researcher's target population was 170 heads of households and 30 employees of Tullow oil well Company in Turkana County. A sample size of 131 respondents was obtained from the target population using the Fisher's formula. The main data collection instrument was the questionnaire. The researcher employed stratified sampling on selecting respondents from different communities and simple random sampling on employees. The data was collected and analyze through descriptive statistics, where tables, frequencies was used in interpreting the respondent's perception on issues in the questionnaires. The data collected for the purpose of study will be adopted and coded for completeness and accuracy. Statistical package for social science (SPSS) program was used for data analysis and interpretation. The researcher used descriptive statistics to analyze the data into meaningful information that will be used to make conclusions and recommendations. The descriptive statistics was used measures of central tendency such as mean, median and mode to describe a group of subjects. The researcher then used graphic presentation such as the use of bar graphs, tables, pie charts and bar charts to present the data. The finding of the study reveals that, majority of the respondents (91.1%) observed that political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment. The study also reveals that majority of the respondents 64.4% agreed that there is expensive land degradation as a result of exploratory projects. The study recommends that the community participation should be considered in making key decisions during oil exploration in Turkana as it has the potential to make suggestions that can reduces the impacts of oil exploration on the communities.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Exploration projects are activities mainly geared towards the extraction of mineral or oil deposits. These activities are especially undertaken for the economic development of a nation that is endowed with such deposits. In addition to economic development, the exploration projects can create new opportunities for local communities. However, explorative activities can also cause considerable disruption. New explorative projects can bring jobs, business opportunities, roads, schools, and health clinics to remote and previously impoverished areas. The benefits can, however, be unevenly shared and for some they may be poorly compensated for the loss of existing livelihoods and the damage to their environment and culture (Lane, 2001). If communities feel they are being unfairly treated or inadequately compensated, exploration can lead to social tension and sometimes to violent conflict (Burns, 2004).

With the dramatic decline in the costs of transporting bulk materials and the emergence of multinational companies as major players, mines can now be located far from where the ores are processed. At the same time, they have become larger and more technically complex, bringing a decrease in employment and an increase in the skill levels required of workers. In many countries, explorations have tended to become specialist enclaves, isolated from other sectors of the economy. The premier example of this is ‘fly-in, fly-out’ operations based on long-distance commuting. This invariably means that the communities living nearby gain less in terms of jobs, business opportunities, and the multiplier effects (Burns, 2004).

The exploration projects are designed to improve on the livelihood development of the communities residing in the marginalized areas where these exploration projects are based. Through exploration activities, it will help to improve the quality of life for marginalized people by providing them with access to health care, livelihood opportunity and protection thereby giving them hope to constructively contribute to their communities. At the local level, livelihood development is about meeting locally defined social, environmental, and economic goals over the long term. Interactions between the mine and community should add

to the physical, financial, human, and information resources available not detracting from them. The challenge is to ensure that the effect of interactions are regarded as positive by those affected locally as well as by the stakeholders of the projects, and that communities develop in ways that are consistent with their own vision. This may be realized through, for example, the provision of social services, income, or skills development. Enhancing community values presents a particular challenge, given the often intense social change brought about by mining and the potential influx of outsiders (Crosby, 2009).

Globally, Saudi Arabia is encouraging the growth of the private sector in order to diversify its economy and to employ more Saudi nationals. Diversification efforts are mostly focused on natural gas exploration and petrochemical sectors. Riyadh is struggling to reduce unemployment among its own nationals. Saudi officials are particularly focused on employing its large youth population, which generally lacks the education and technical skills the private sector needs. Alongside the oil exploratory projects, the Saudi government has begun establishing six 'economic cities' in different regions of the country to promote foreign investment and plans to spend \$373 billion between 2010 and 2014 on social development and infrastructure projects to advance Saudi Arabia's economic development. (Chowdhury, 2005)

In African, the continent contributed 6.5% of the world's mineral exports during 2011 from mining 20% of the world's land area. From a regional perspective, Nigeria is found to produce two-thirds of Africa's oil exports by value followed by Libya producing approximately one-third oil export. The biggest player in the region is Nigeria. However, exploration increasingly occurs in remote regions with little or no development. By nature of their remoteness, the areas to be explored are frequently ones where the title to land is disputed or unacknowledged and where local government lacks the capacity to provide essential services or to mediate between mining companies and local communities. A consequence is the potential for oil extraction companies to wield too much power in the local context as seen with Nigerian exploration projects. Traditional cultures may have difficulty coping with vast industrial operations and the influx of outsiders. A growing appreciation of the intrinsic value of traditional cultures has heightened awareness of these issues. All these trends have significantly changed the balance of costs and benefits at the community level and have contributed to a rethinking of mine-community relations. (Ericsson 2008).

In Kenya, until recent years, mining exports only amounted to around 1 per cent of the GDP. The mineral deposits were predominately titanium and non-metallic substances such as soda ash, kaolin, fluorspar and gemstones. This however is changing. Kenya's first ever large-scale mine, the Northern Tullow oil extraction, will commence exploration later in few coming years. It is estimated to triple the country's present mining exports and will be the country's fourth largest foreign exchange earner. The mining industry in Kenya is gaining recognition owing to the significant deposits of oil that have been discovered in northern part of the country in recent months. Kenya's export-oriented mining and quarrying is driven primarily by the commodity hunger of the world's largest economies. The country's economy is projected to grow by almost 1.8% p.a. in the recent times. Of particular interest to Kenya mining activities is the positive growth outlook for its key trading partners (Mayer Brown, 2011).

However, in Kenya as well there is an inherent tension between local and national rights to exploration projects and the other benefits brought about by these explorations. That people living near mines are adversely affected by them and should be compensated for any inconvenience, hardship, or loss of opportunity suffered is generally not disputed. The question is, should they receive a larger share of the benefits? If so, how should that share be determined? The rationale for local communities to receive a greater share of the benefits should be clear: first, for communities to accept mining on their doorstep, they must see some realizable benefits over and above being compensated for loss or other impacts. Second, for mining to contribute to the goals of sustainable development at the community level, it must provide a net benefit to the affected community. Exploration projects require an equitable sharing of benefits; if there is obvious inequity, there will be strike, which impedes the livelihood development process. The question is therefore more appropriately, how the share of benefits received by communities should be decided (Mayer Brown, 2011).

1.2 Statement of the Problem

Ideally, in as much as exploration projects are of great importance to the economic developments of a nation, it however poses grave dangers to human beings living around such areas of exploration. It exposes the communities to dangers associated with mining activities that might cause health problems to them due to emission of gases. Much of the environmental damage caused by explorations affects local communities, most significantly in terms of their livelihoods and health. Environmental health problems may become evident

not just close to the mine, but some distance away. Overburden, waste rock, tailings dams, buildings, roads, as well as immigration of population and increased human activity, all create considerable change in local environments. This may lead to loss of biological diversity, including plants and animals important to peoples' livelihoods, such as pasture for livestock. The changes may affect land used by indigenous people for grazing their livestock.

Currently, environmental damage is rampant in exploration sites even with all the dangers that come with it. Extraction is perceived by mining stakeholders to be more convenient to them and sets to serve their needs at the expense of the local communities in such marginalized areas. The mining projects mostly emit gases and carry on extraction activities without much concern for the local people in surrounding. This poses a great danger as accidents are bound to happen. With all the risks involved with mining activities, the extraction companies continue to extract the mines. It is in this context therefore that the study sorts to determine the influence of extraction projects on livelihood development of communities in marginalized areas.

1.3 Purpose of the Study

The purpose of this study was to investigate how exploration projects influence the livelihood development of communities in marginalized areas.

1.4 Research Objectives

The specific objectives of this research study are as follows:

1. To establish the influence of oil exploration projects on land acquisition among the Turkana community in Turkana County.
2. To assess the influence of oil exploration projects on health among the Turkana community in Turkana County.
3. To examine the influence of oil exploration projects on education among the Turkana community in Turkana County.
4. To determine the influence of oil exploration projects on infrastructural development in Turkana County.
5. To establish the influence of oil exploration projects on environmental sustainability among the Turkana community in Turkana County.

1.5. Research Questions

- i. What is the influence of oil exploration projects on the acquisition of land among the Turkana community in Turkana County?
- ii. What is the influence of oil exploration projects on the health of the Turkana community in Turkana County?
- iii. What is the influence of oil exploration projects on the education standards of the Turkana community in Turkana County?
- iv. What is the influence of oil exploration projects on infrastructural development among the Turkana community in Turkana County?
- v. What is the influence of oil exploration projects on environmental sustainability among the Turkana community in Turkana County?

1.6. Significance of the Study

This research finding will provide perceptions and understanding on the influence of exploration projects on the socio-economic development of communities in marginalized areas. The findings will provide valuable information to government, stakeholders in mining sector and the community leaders on how to manage and control exploration activities in order to benefit both the sector and the communities at large.

The findings of the research will be of importance to the stakeholders in the mining sector, as they will provide an understanding on the issues that exploration activities causes on the livelihood development of the communities residing in marginalized areas where exploration projects are common and provide recommendations on how to address the problem posed by the exploration activities to local people in such areas.

The findings of the study also will be of great significance to the government through the ministry of industrialization as they will provide on the measures need to be taken in order to protect the interest of the local communities residing in the marginalized areas where explorations are done. It will also help them develop laws and regulations governing exploration activities for the interest of all stakeholders involved.

Through adoption of the recommendations of these research findings, the community leaders will get to know on how to safeguard and protect the interests of both their people and the land.

1.7. Delimitations of the Study

The study was solely focused on assessing how exploration projects influence on the livelihood development of communities in marginalized areas, specifically concentrating on the Tullow Exploration Company and its oil exploratory activities in Turkana County in the Northern part of Kenya. The main data collection instrument was the questionnaire. The target population for the study was the local communities living in the area surrounding the exploration company's site. The study was conducted for three months starting from March 2014-July 2014.

1.8 Limitations of the Study

Time and inaccessibility of most parts of the area of study is expected to be the major limitations to this study because of busy schedules of the respondents and the poorly developed roads in the area. Other limitation to this study was high illiteracy, hostility by community residents as well as lack of cooperation from the local communities.

1.9 Assumptions of the Study

The study was carried out with the assumptions that the respondents were in a position and willing to give the correct information and the researcher had enough time to collect, gather and analyze information.

1.10 Definition of Significant Terms

Project- a collaborative enterprise, involving research or design that is carefully planned to achieve a particular aim

Conflict-discord of action, feeling, or effect; antagonism or opposition, as of interests or principles: a conflict of ideas

Exploration projects- Exploration projects are activities geared towards extraction of oil deposits. These activities are significant for economic developments of a nation producing such deposits (Burns, 2004).

Livelihood development- livelihood development is about meeting locally defined social, environmental, and economic goals over the long term.

Interactions between the mine and community should add to the physical, financial, human, and information resources available not detracting from them (Crosby, 2009).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The main purpose of this literature review is to identify and examine what has been done by other scholars and researchers in relation to the influence of exploration projects on livelihood development of communities in marginalized areas. This chapter is broken down into the following sections: Empirical review of the study objectives, knowledge cap from the review of literature, theoretical framework of the study, and the critical review of theories that will guide this study.

2.2 Empirical Review of the Study Objectives

This section provides a review on what other scholars have done in respect to exploratory projects and socio-economic development. It will look empirically on how exploration projects influences on the livelihood development of communities in marginalized areas.

2.2.1 Oil Exploration Activities and Land Acquisition among Communities in Marginalized Areas

The law provides that the owner of a piece of land owns everything up to the sky and down to the center of the earth and whatever is attached to the land becomes part of the property of the owner. Therefore any mineral deposits should belong to the land owner. But the law in many countries around the world also provides that the right of occupancy could be revoked in the public interest which includes the requirement of land for mining purposes or oil pipelines or for any purpose connected therewith (Okoth, 2012).

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 (Arce, 2004).

Oil has now become the prime driver for a wave of land leasing in marginalized areas. Speculators are buying land in these areas with the intention of selling back at inflated prices. It is a known fact that with the oil deposit in these marginalized areas, powerful multinational

companies unashamedly lobby respective governments to enter into secretive agreements; corruption in most countries thrives in secrecy. Most mining agreements or contracts in remain 'confidential' and are often negotiated by the multinationals and individuals who have captured state structures and are able to manipulate legislators. The power to grant oil concessions rests with the central government far away in capital cities. Land leasing in marginalized areas will therefore mean domination of the community land and environment by the state governments and their partners, the oil drilling multinationals (Okoth, 2012).

The situation is further aggravated by the fact that families may be relocated from their community lands. Those directly dispossessed end up with little or no compensation. This brings about the alienation of the locals from their lands, whereas they used to move freely with their animals as in the case of nomadic pastoralists. The extensive exploration and exploitation of oil in the marginalized territories further aggravates the pressure on the land which results to alienation and impoverishment of the local community who are denied access to environmental resources (Okoth, 2012).

Moreover, oil exploration concessions in marginalized areas are given without consulting the local inhabitants whose lives are tied to the land. Usually, the local communities have no prior knowledge about land and mining rights sales; they have no knowledge of which company receives the exploration license and contracts. Worse still, they are usually forced 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 (Okoth, 2012).

To maintain social stability in marginalized areas, the respective governments and the multinationals need to engage more effectively with the local people, not on the basis of ethnicity but as citizens with rights and duties. The concerned authorities should enact a proper community land acquisition law which should include a requirement for multinationals to pay local taxes in exploration and exploitation of oil. There should be no tax holidays and special tax treatments to exploit assets such as oil for the oil drilling multinationals. If governments do so it will prompt a race to the bottom to the marginalized people, pitting the poor against the poor and reducing the bargaining of the state and citizens. The government should also establish royalty rates derived from oil wealth to owners of community land. Multinational companies that will be involved in drilling oil in marginalized

areas should pay back to the local people from the profits generated by their oil activities (Arce, 2004).

Additionally, social actors should help local communities to undertake social auditing of these companies. This will help the local people know how their land is leased, the company directors, annual accounts and the profit made; where the companies are from, what trade they undertake in other countries with different names, what political and social havoc they have caused in those countries and how much tax they pay (Arce, 2004).

Conclusively, human welfare and redistribution of resources should emerge as the key agenda as oil drilling goes on in marginalized areas. The respective governments and the multinationals should therefore ensure economic rights for the local Turkana communities. If not, social justice actors should contest and block further exploration and exploitation of oil until the marginalized people's grievances are addressed (Okoth, 2012).

2.2.2 Oil Exploration Activities and the Health of Communities in Marginalized Areas

Case studies world over indicate that extraction of natural resources and other major development projects in or near the territories of indigenous peoples is one of the most significant sources of abuse of indigenous peoples rights. The health hazards created by oil exploration and exploitation are covert and slow in action. They are not given the deserved attention in official documents, even as they can be major contributors to the disease burden in oil-bearing communities. For instance an average of 240,000 barrels of crude oil are spilled in the Niger delta every year, mainly due to unknown causes (31.85%), third party activity (20.74%), and mechanical failure (17.04%). These spills contaminate the surface water, ground water, ambient air, and crops with hydrocarbons, including known carcinogens like polycyclic aromatic hydrocarbon and benzo (a) pyrene, naturally occurring radioactive materials, and trace metals that are further bioaccumulated in some food crops. The oil spills could lead to a 60% reduction in household food security and are capable of reducing the ascorbic acid content of vegetables by as much as 36% and the crude protein content of cassava by 40%. These could result in a 24% increase in the prevalence of childhood malnutrition. Animal studies indicate that contact with Nigerian crude oil could be hemotoxic and hepatotoxic, and could cause infertility and cancer (Nwankwo and Dule, 2001).

Each year, 100 s of post-impact assessment (PIA) studies are conducted to assess the impact of the hazards generated by the oil industry on the physical and social environment and on

human health. But, most of these studies are conducted without any significant contributions from health professionals and are reported without highlighting the immediate and long-term implications of the identified hazards on the health of members of the impacted communities. The ingestion, dermal contact, and inhalation of the other constituents of spilled crude oil also have some acute and long-term health implications. Although the acute manifestations of the exposures are often mild and transient, severe exposures as reported in a 2-year-old child could result in acute renal failure, 27 or even hepatotoxicity 29 and hemotoxicity, 30 as reported in the animal studies (Nwankwo and Dule, 2001).

Another notable health concern associated with exploratory activities is gas flaring. This is the burning of natural gas that is associated with crude oil when it is pumped up from the ground. In petroleum-producing areas where insufficient investment is made in infrastructure to utilize natural gas, flaring is employed to dispose of this associated gas. Also chemical factories, oil refineries, oil wells, rigs and landfills, gaseous waste products and sometimes even non-waste gases produced are routed to an elevated vertical chimney called a gas flare and burnt off at its tip. Waste gases are subjected to such a process either because the gases are waste or it is difficult to store and transport them. Non-waste gases are burnt off to protect the processing equipment when unexpected high pressure develops within them (Nwankwo and Dule, 2001).

Gas flaring in oil rigs and wells contributes significantly to greenhouse gases in our atmosphere. The implications of gas flaring on human health are all related to the exposure of those hazardous air pollutants emitted during incomplete combustion of gas flare. These pollutants are associated with a variety of adverse health impacts, including cancer, neurological, reproductive and developmental effects. Deformities in children, lung damage and skin problems have also been reported. Moreover hydrocarbon compounds are known to cause some adverse changes in hematological parameters. These changes affect blood and blood-forming cells negatively. They can give rise to anemia (aplastic), pancytopenia and leukemia (Nwankwo and Dule, 2001).

In terms of community health, a basic paradox arises. Resources available locally for health services typically increase markedly with the advent of exploration projects as companies develop facilities for employees their families and perhaps to the entire community. Moreover, employment and increased living standards can bring important nutritional and

psychological benefits, and hence better health standards. But these may not necessarily translate into overall improvements in community health if the facilities are not made available to the broader community or if the introduction of new diseases and health risks associated with the exploration are taken into account. Relatively isolated marginalized communities may be particularly vulnerable to diseases brought by as a result of exploration operations. Therefore, measures should be taken by the relevant stakeholders concern with exploration to care for health reasons of the surrounding marginalized communities (Hage, 2009).

2.2.3 Oil Exploration Activities and Education in Communities in Marginalized Areas

Access to educational services and facilities can improve dramatically for communities close to or around exploration projects, particularly for exploration projects in marginalized areas of developing countries. The exploration company is often involved in the provision of educational facilities, either directly or indirectly through the redistribution of revenues by the state or through innovative means such as the tax credit scheme. Other increases in educational opportunities come through scholarships. These can come in the form of corporate support or through Trust Funds or foundations, such as the Non Governmental Organizations (NGOs), which sponsors educational and other social projects to marginalized communities. Even though the opportunity to receive income through direct or indirect employment in the exploration projects can act as a disincentive for schooling, education is one of the most significant and lasting benefits that a community can derive from such exploration activities (Hannan, 2004).

2.3.4 Oil Exploration Activities and the Infrastructural Development of Marginalized Areas

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 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 key to mining's ability to contribute to sustainable development at the community level (Gulati, 2003).

There can also be significant infrastructure improvements in the marginalized areas with the construction of a large exploration projects. Most exploration projects of any size are served by good transport network, water supplies, sanitation systems, and electricity. If these are restricted to use by the company, and designed solely for company objectives, they may be of little relevance communities in marginalized areas. With some advance planning and a willingness to consult with the community, however, these can bring lasting benefits at little or no added cost. And the development of infrastructure may facilitate other forms of economic activity, such as tourism (Gulati, 2003).

2.3.5 Oil Exploration Activities and Environmental Sustainability in Marginalized Areas

The 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 Ekakprere, 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 and Dule, 2001).

2.2.6 Knowledge gap

Scholar such as Burns (1961) and Crosby (2009) have paid limited attention to the possible linkages between exploration projects and community livelihood development particularly in marginalized areas. Despite significant process in developing the livelihood of less of the fortunate individual especially in marginalized areas over the past two decades, these scholars among many have failed to reach consensus on how exploration projects can actually influence livelihood development of the marginalized communities (Ledgerwood, 2002). Also, although the term development has been central to exploration companies thought and practiced for some time, no study specifically exists evaluating how practice of exploration projects can influence livelihood development of marginalized communities. The hypothesis of this study is to show how exploration operations can help the marginalized communities work towards sustainable livelihood development. It is therefore against this background that the study aims to fill the existing gap as to how specifically exploration projects in various marginalized areas can enhance the aspect of livelihood development such as social development and economic development of the marginalized communities in such areas with the aim of providing comprehensive literature as to the influence of exploration projects on livelihood development of marginalized communities.

2.3 Theoretical Framework

2.3.1 Frustration-Aggression Theory

Developed by Dollard and Miller (1939), this theory posits that frustration increases the likelihood of aggression, akin to what the people of the marginalized communities have exhibited over the years against the state and the major oil multinationals operating in the region. According to the Frustration-Aggression theory, all aggression has its origin/root causes in the frustration of one or more actors as a result of another actor's achievement of a goal. Therefore conflict is as a result of the lack of fulfillment of an individual's or group's objectives and the frustration that this breeds. Generally, human needs have always been insatiable and the failure to meet all these demands informs series of conflicts between political actors (Berkowitz, 2001).

Over the years, oil-bearing communities in the marginalized areas have had to endure neglect by their government and the negative effects of environmental practices by multinationals. The attempts by these communities to ensure greater control of their resources have yielded little results. Furthermore, local communities have deemed the performance of multinationals in the area of corporate social responsibility as less than satisfactory, leading to

environmental activism which often assumes violent dimensions. The failure of both the state and the multinationals to meet the expectations of the people in marginalized areas has bred frustration and aggression in certain regions as illustrated by the forms of violence ranging from hostage taking and attack on oil facilities to conflict between ethnic militants and government forces (Berkowitz, 2001).

Hence, the Frustration-Aggression theory vividly illustrates why the ethnic militias in the marginalized areas have resorted to violence as a form of response to the state of affairs in the regions. It is not uncommon for activists, leaders and ethnic militias in the regions to predicate the violent behavior associated with the local politics on (pent-up) frustration induced by the policies of the state and those of oil multinationals. The local people in these regions have been disgruntled by what they perceive as the deliberate policies of marginalization, alienation, environmental degradation on the part of the state and the oil multinationals. Indeed, it is plausible to locate many crises within the context of the frustration arising from unfulfilled expectations (Berkowitz, 2001).

2.3.2 Theory and Hypotheses of Exploration-Exploitation Framework

The theory was developed by Levinthal and March (1991). The two argued that, the exploration-exploitation framework distinguishes two broad patterns of learning behaviors. March (1993) defined them as follows: Exploration includes things captured by terms such as search, variation, risk taking, experimentation, play, flexibility, discovery, innovation while exploitation includes such things as refinement, choice, production, efficiency, selection, implementation and execution. Levinthal and March (1991) further added that exploration involves a pursuit of new knowledge, whereas exploitation involves the use and development of things already known. However, more recently researchers have elaborated these ideas by considering their implications not only for intra but also for inter organizational learning. They have recognized that collaboration with partners facilitates learning by accessing new knowledge residing outside a firm's boundaries and by collaboratively leveraging existing knowledge with partners. Thus, collaborations, which are voluntary arrangements among independent firms involving exchange, sharing, or joint development or provision of technologies, products, or services have become a noteworthy vehicle for exploration and exploitation (Gulati, 2003).

The theory has focused on three domains of Exploration-Exploitation. First is Function exploration-exploitation domain. This domain defines the nature of alliance relationships.

However, Subsequent research by (Koza, Lewin, 2000) in supportive of this domain has further focused on the value chain function that these domains serve. They argued in line to the theory that firms that engage partners in R&D that may lead to innovative technologies and applications can be said to participate in exploration, whereas firms that rely on alliances for commercializing and using existing technologies or employing complementary partner capabilities undertake exploitation. In this sense, exploration projects engage in upstream activities of the value chain, enabling partners to share tacit knowledge and develop new knowledge. In contrast, exploitation projects engage in downstream activities such as commercialization and marketing that leverage and combine partners' existing capabilities through exchanges of explicit knowledge (Levinthal, 1991). The distinction between acquiring and generating new knowledge through exploration and accessing, integrating, and implementing existing knowledge through exploitation has been thus linked to firms' polar tendencies to engage in R&D alliances versus marketing alliances (Rothaermel, Deeds, 2004).

The first domain framework of exploration-exploitation discussed by the theory is the Structure exploration-exploitation domain. This structure domain of exploration-exploitation takes into account the network positions of a firm's partners. Recurrent alliances between firms are considered a form of exploitation, and alliances formed with new partners are considered exploration. When a firm forms recurrent alliances with a select group of partners, it can rely on existing arrangements and channels to facilitate access and transfer of knowledge already prevailing in its immediate alliance network. In this regard, Levinthal and March (1991) argued that forming additional alliances with existing partners is a form of exploitation in which a firm reinforces its existing relationships in order to use its current knowledge base. Hence, the proximate network position of partners facilitates the flow of knowledge and information and enhances the efficiency of collaboration. By forming alliances with familiar partners, firms can also rely on prior experience and inter-firm trust to enhance the predictability and reliability of collaboration. Such a pattern of alliance formation corresponds to March's (1991) notion of exploitation. In contrast, when partners have no prior ties to a firm, the firm cannot rely on direct experience with these partners, but it can broaden its reach and seek knowledge that cannot be channeled through its immediate network.

The second domain focused by the theory was Attribute exploration-exploitation. Unlike the function domain, which defines the nature of alliance relationships, and the structure domain,

which relates to the prior network positions of partners, the attribute domain refers to intertemporal variance in the organizational attributes of a firm's partners. Following March (1991), the theory associate exploration with experimentation and variation in routines, processes, technologies, and applications. Exploration enhances adaptation to environmental changes by increasing variance in these organizational attributes and by supporting "long jumps" or reorientations (Levinthal, 1997) that enable a firm to adopt new attributes and attain new knowledge outside its domain). A deviation from a systematic pattern of alliance formation with partners that share certain organizational attributes is thus considered an exploratory behavior. (Rosenkopf, Nerkar, 2001)

In addition, when a firm persistently forms new alliances with partners that are similar to its prior partners with respect to attributes such as size and industry focus, it can apply established heuristics and effective governance mechanisms for assimilating external knowledge (Darr, Kurtzberg, 2000) and can also efficiently accumulate and apply its partnering experience in the learning process .Such persistence in alliance formation leads to repetition based improvement, experiential learning, and specialization, which are associated with exploitation (Levinthal & March, 1993). Within the attribute domain, firms' alliance networks range from exhibiting consistency in partners' attributes (exploitation) to showing frequent deviation from such a pattern (exploration).

In relation to the study, helps in understanding the core normative behavioral balance perspective between exploration and exploitation. The notion of balance refers to equilibrium between conflicting tendencies that is, the exploration by the company and the community exploitation. Existing research reveals a striking contrast between normative assumptions and behavioral tendencies with respect to the balance between exploration and exploitation. On the one hand, researchers have normatively assumed that firms should seek to balance exploration and exploitation because both short-term productivity and long-term innovation are essential for community livelihood development, success and survival (March, 1991). Rivkin and Siggelkow (2000) highlighted further that there is need for companies to strike the balance between exploitation and exploration. Despite the undesirable outcomes and self-destructive nature of adaptive processes (March, 1991), failure and success traps may lead to excessive exploration or exploitation, resulting in imbalance (Levinthal & March, 1993). Thus, it is to this context that the research is therefore seek to unveil such in line with what influence the exploration projects have on the livelihood development of marginalized

communities where they are part and person of the exploration and exploitation projects defined there in by the theory.

2.3.3 Theory of Livelihood Perspective and Rural Development

The theory was developed by Ian Scoones (2009). The theory postulates that livelihoods perspectives have been central to rural development thinking and practice in the past decade. Scoones (2009) further argued that diversity is the watchword, and livelihoods approaches have challenged fundamentally single-sector approaches to solving complex rural development problems. The appeal is simple: look at the real world, and try and understand things from local perspectives. Responses that follow should articulate with such realities and not try and impose artificial categories and divides on complex realities. Belonging to no discipline in particular, livelihoods approaches can allow a bridging of divides, allowing different people to work together, particularly across the natural and social sciences. Being focused on understanding complex, local realities livelihoods approaches are an ideal entry point for participatory approaches to inquiry, with negotiated learning between local people and outsiders (Ashley and Carney, 1999).

Following the strong advocacy for sustainable livelihoods approaches in development from the 1990s, many development agencies started to advocate livelihoods approaches as central to their programming, and even organizational structures. Yet the simple, rather obvious, argument for a livelihoods perspective, as discussed further below, is not so easy to translate into practice, with inherited organizational forms, disciplinary biases and funding structures constructed around other assumptions and ways of thinking. Over the last decade or so 'livelihoods' has thus emerged as a boundary term, something that brings disparate perspectives together, allows conversations over disciplinary and professional divides and provides an institutional bridging function linking people, professions and practices in new ways (Ashley and Carney, 1999).

According to the theory, despite the claims of some genealogies of livelihoods thinking, such perspectives did not suddenly emerge on the scene in 1992 with the influential Chambers and Conway Paper. Far from it: there is a rich and important history that goes back another 50 or more years where a cross-disciplinary livelihoods perspective has profoundly influenced rural development thinking and practice. One early example is the work of the Rhodes-Livingstone Institute in what is today Zambia. This involved collaborations of ecologists, anthropologists,

agriculturalists and economists looking at changing rural systems and their development challenges. While not labeled as such this work was quintessential livelihoods analysis – integrative, locally-embedded, cross-sectoral and informed by a deep field engagement and a commitment to action (Fardon, 1990).

Yet such perspectives did not come to dominate development thinking in the coming decades. As theories of modernization came to influence development discourse, more mono-disciplinary perspectives ruled the roost. Policy advice was increasingly influenced by professional economists, rather than the rural development generalists and field-based administrators of the past. With the framing in terms of predictive models, of supply and demand, inputs and outputs, both micro and macro economics in different ways, offered a framing which suited the perceived needs of the time. The post-World War II institutions of development – the WorldBank, the UN system, the bilateral development agencies, as well as national governments in newly independent countries across the world – reflected the supremacy of this framing of policy, linking economics with specialist technical disciplines from the natural, medical and engineering sciences. This pushed alternative sources of social science expertise, and particularly cross-disciplinary livelihoods perspectives, to the side. While, alternative, radical Marxist perspectives engaged at the macro-level on the political and economic relations of capitalism in post-colonial formations, they rarely delved into the particular, micro-level contextual realities on the ground (Walker, Ryan, 1990).

The theory is significance to the study as it helps in understanding that livelihood development in rural setup is key to economic development and the need to think of rural perspective in a broader view and focused on understanding complex, local realities livelihoods approaches that are an ideal entry point for participatory approaches to inquiry, with negotiated learning between local people and exploration projects based in the marginalized communities. It is to this context that the study seeks to find out the influence the exploration projects have on the rural livelihood devolvement of marginalized communities and on the other hand help the stakeholders responsible for these exploration projects to understand things from local perspectives in order for sustainable development in such areas to be realized.

2.4 Critical Review

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 undermine 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 Hussain, (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 as 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, 2009).

2.5 Conceptual Framework

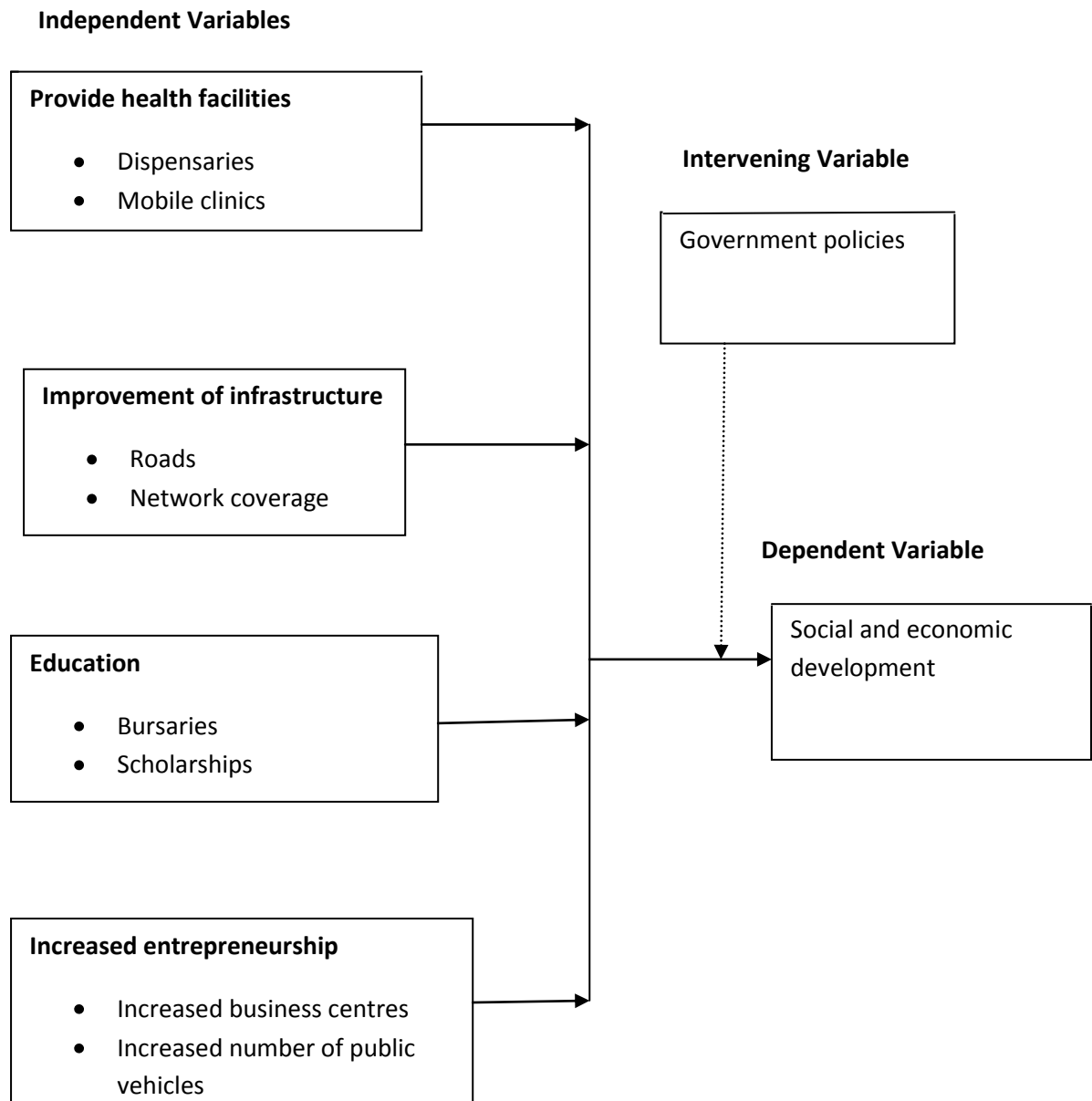


Figure 2.1 Conceptual Framework

Source: Authors (2014)

CHAPTER THREE

This chapter present detailed description of the method applied in carrying out the research study. It outlines the procedure used to gather data that is: study area, research design, population and sampling technique, the research instrument, data collection and data analysis.

3.1 Research Design

A research design is considered as a scheme for research, dealing with at least four problems that are in relation to the study case, that is, which questions to study, what data to collect, which data is relevant and how to analyze the results. The best design normally depends on the research questions and also the orientation of the researcher (Robson, 2003). In this research study, a descriptive survey study was the appropriate research design to be used. A survey study is a study of a certain situation rather than a wide-spread statistical. It is a method used to narrow down a very wider field of research into an easily researchable topic. This design was suitable to be used because of the large area of interest of the study.

3.2 Study Area

The study was conducted in Ngamia1 area where Tullow Oil Company is operating. The well, located in the Turkana County of Kenya Block 10BB has a 50% operated interest in multiple licences in the Kenya & Ethiopia Rift Basins covering in excess of 100,000 square kilometres. The Turkana County where the Ngamia1 discovery has been made is one of seven basins mapped in Tullow's acreage and is similar in size to the 9,000 square Kilometre Lake Albert Rift basins in Uganda. Turkana County where the well is located is one of the counties in the rift valley province of Kenya. It is located in the north western Kenya bordering Marsabit County to the east, the south and Baringo and west Pokot County to the south. It covers an area of 68,680. Sq. km. It has hot and warm climate with unreliable rainfall pattern ranging between 300mm to 400mm per annum. Majority of the residents of Turkana County depend on nomadic pastoralism and fishing as a major source of their livelihood. Fishing is practiced in the waters of Lake Turkana. Goats' camels, donkeys and zebu cattle are the most common livestock kept by the communities in the region. According to the 2009 census the county had a population of 855,399. The County is known to be rich in oil according to the recent discoveries.

3.3 Target Population

Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. The target population usually has varying

characteristics and it is also known as the theoretical population. The target population for a study is the entire set of units for which the data are to be used to make inferences. Thus, the target population defines those units for which the findings of the survey are meant to generalize. Establishing study objectives is the first step in designing a survey. Target populations must be specifically defined, as the definition determines whether sampled cases are eligible or ineligible for the survey. The geographic and temporal characteristics of the target population need to be delineated. The study area has 22 villages and 51 households with four different communities cohabiting together. The researcher’s target population was 51 heads of households and 10 permanent employees of Tullow oil well Company in Ngamia1.

Table 3.1 Target Population

Target Group	Target number of community residents
Turkana community	51
Employees of Tullow company	30
Total	51

Source: Authors (2014)

3.4 Sampling Procedure

Sampling is a procedure of selecting a part of the population on which research is to be conducted (Mugenda and Mugenda, 2003). It ensures that conclusions from the study can be generalized to the entire population. The researcher employed stratified sampling on communities and purposive sampling on employees. The respondents were stratified according to their community identity. Each individual from a community represented the population. The target population was 51 respondents from which the sample size was selected. The sample size for this research will be obtained using the Mugenda and Mugenda (2003) formulae for a target population of less than 10,000. It was scientifically computed as follows;

$$nf = \frac{n}{1 + \frac{n}{N}}$$

Where;

nf = Sample size (when the population is less than 10,000).

n = Sample size (when the population is more than 10,000); 384.

N = Estimate of the population size;51

Therefore the sample size for this study will be calculated as follows;

$$nf = \frac{384}{1 + \frac{384}{51}}$$
$$= 45$$

This study thus sampled 45 respondents.

Table 3.2 Sample Size of respondents

Target Group	Target Population	Sampling Procedure	Sample Size
Turkana community	55	41/ 51x45	36
Employees	30	10/51x45	9
Total	200		45

3.5 Description of Research Instruments

The study used questionnaires to collect data.

3.5.1 Questionnaire

The researcher used questionnaires as the data collection tool. A questionnaire is a research tool that gathers data over a large sample (Nsubuga, 2000). The questionnaire was the most appropriate research tool as it allows the researcher to collect information from a large sample with diverse background; the findings remain confidential, save time and since they are presented in paper format there is no opportunity for bias. Questionnaires were used to collect data from the communities.

3.6 Validity and Reliability of research instruments

3.6.1 Validity of research instruments

Validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of data actually represent the phenomenon under study (Mugenda & Mugenda, 1999). Validity answers the question ‘are my findings true?’ To test the content validity of instruments, the researcher discussed the instruments with experts and specialists to ensure that all the concepts under investigation are measured. A pilot study also aided in improving the validity of the instruments. Items were checked to ensure they accurately measure the concepts under study.

3.6.2 The Reliability of research instruments

To determine the reliability of the instruments, pre-testing through piloting was done in one community in the region but not in the study. The reliability of the items was based on estimates of the variability among the responses to the items. The reliability coefficient was determined using Karl Pearson’s product moment correlation coefficient because the method is more accurate as it determines the stability of the instrument. The instruments were re-administered again to the same respondents after a period of two weeks and identification maintained. A reliability index (alpha) greater than or equal to 0.7 was considered to be high enough for the instrument to be used in the study.

3.7 Data Collection Procedure

The researcher acquired a permit from the University of Nairobi and Ministry of Education to conduct the research. The researcher then got permission from local authorities in the communities and the management of Tullow oil Company to administer the questionnaires to respondents. The researchers distributed the questionnaires and collect them immediately after the exercise to ensure efficiency in collection of the data. The researcher then re-administered questionnaires again to the same respondents after a period of two weeks.

3.8 Methods of Data Analysis

The data was collected and analyze through descriptive statistics, where tables, frequencies were used in interpreting the respondent’s perception on issues in the questionnaires. Therefore, to answer the research question, after data has been collected and analyzed, it was presented using frequency, table’s graph and pie charts. The data collected for the purpose of study were adopted and coded for completeness and accuracy. Statistical package for social

science (SPSS) program was used for data analysis and interpretation. The researcher used descriptive statistics to analyze the data into meaningful information that were used to make conclusions and recommendations. The descriptive statistics used measures of central tendency such as mean, median and mode to describe a group of subjects. The researcher then used graphic presentation such as the use of bar graphs, tables, pie charts and bar charts to present the data.

3.9 Ethical Considerations

There are certain ethical protocols that were followed by the researcher. The first is soliciting explicit consent from the respondents. This ensured that their participation to the study is out of their own volition. The researcher also ensured that the respondents are aware of the objectives of the research and their contribution to its completion. Another ethical measure will be treating the respondents with respect and courtesy (Schutt 2009). This was aimed at ensuring that the respondents are at ease; it made them more likely to give candid responses to the questionnaire. The respondents also informed that the responses they would be treated confidentially and be used strictly for the study and for no other purposes. There also are some ethical measures that will be followed in the data analysis. To ensure the integrity of data, the researcher will check the accuracy of encoding of the responses. This was carried out to ensure that the statistics generated from the study are truthful and verifiable (Schutt 2009).

3.10 Operational Definition of Variables

To achieve the objectives of the study the researcher investigated the influence of influence of oil exploration projects on the social/economic development of communities in marginalized areas: a case of Turkana community in Turkana County, Kenya. The objectives of the study include to: establish the influence of oil exploration activities on land acquisition among the Turkana community in Turkana County, assess the influence of oil exploration activities on health among the Turkana community in Turkana County, examine the influence of oil exploration activities on education among the Turkana community in Turkana County, determine the influence of oil exploration activities on infrastructural development in Turkana County and establish the influence of oil exploration activities on environmental sustainability among the Turkana community in Turkana County. To achieve these objectives questionnaires were used each with specific questions for each objective.

Table 3.3 Operational Definition of Variables

Objective	Variables	Indicators	Measurement scale	Tools of analysis	Types of tools	of
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To establish the influence of oil exploration activities on land acquisition among the Turkana community in Turkana County	Dependent Land acquisition Independent Oil exploratory activities	<ul style="list-style-type: none"> • Landlessness • Displacement • Forced evictions 	Nominal Ordinal	Descriptive statistics. tables	Frequency distribution tables
To assess the influence of oil exploration activities on health among the Turkana community in Turkana County	Dependent Health Independent Oil exploratory activities	<ul style="list-style-type: none"> • Disease outbreak • Greenhouse emissions 	Nominal Ordinal	Descriptive statistics Tables	Frequency distribution tables
To examine the influence of oil exploration activities on the education of the Turkana community in Turkana County	Dependent Education Independent Oil exploratory activities	<ul style="list-style-type: none"> • More schools • Higher literacy levels 	Nominal Ordinal	Descriptive statistics. tables	Frequency distribution tables
To determine the influence of oil exploration activities on infrastructural development in Turkana County	Dependent Infrastructural development Independent Oil exploratory activities	<ul style="list-style-type: none"> • Better road networks • Urban settlements 	Nominal Ordinal	Descriptive statistics Tables	Frequency distribution tables
To establish the influence of oil exploration activities on environmental sustainability among the Turkana community in	Dependent Environmental sustainability Independent Oil exploratory activities	<ul style="list-style-type: none"> • Air pollution • Land degradation 	Nominal	Descriptive statistics, Tables	Frequency Table

**Turkana
County**

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION

4.1 Results from Residents

4.1.1 Background Information

The researcher sought to establish the background information of the residents. The findings were determined and presented as below.

4.1.2 Gender of the Respondents

The researcher sought to determine the gender of the respondents and was presented in the below table.

Table 4.1: Gender

Gander	Frequency	Percentage
Male	13	36
Female	23	64
Total	36	100

Source: Research Data (2014)

The findings indicate that 36.1% of the respondents were male while 63.9% of the respondents were female. This shows that although female respondents were many compared to male, the spread of the respondents was valid enough for the study since from the findings, there was no biasness towards either gender.

4.1.3 Age of the Respondents

The researcher sought to determine the age of the respondents. This was determined and presented in the table below.

Table 4.2 Age of respondents

Age Bracket	Frequency	Percentage
31-35	18	50.0
36-40	6	16.70
40-45	0	0
46-50	9	25
Over 52	3	8.30
Total	26	100

Source: Research Data (2014)

The findings indicate that 50% of the respondents were between 31-35 years, 16.7% of the respondents were between 36-40 years, 25.0% of the respondents were between 46-50 years while 8.3% of the respondents were above 51 years. This indicates that a majority of the respondents were between 31-35 years. This shows that the respondents were old enough to have had experience on the impacts of the several exploration projects in their socio-economic development. Thus this was valid information that the sample selected was valid enough in terms of age spread and representation to carry out the study.

4.1.4 Level of education of the respondents

The researcher determined the level of education of the respondents and the results are presented in the table below.

Table 4.3 Level of education of the respondents

Educational level	Frequency	Percentage
Certificate	8	22
Diploma	13	36
Degree	6	17
Others	9	25
Total	36	100

Source: Research Data (2014)

From the findings, 22.2% of the respondents were of a certificate level, 36.1% of the respondents were of a diploma level, 16.7 had degrees while 25% observed that they had other qualifications.

4.1.5 How oil exploration activities influences land acquisition among Turkana community in Turkana County

The researcher sought to establish the effects of oil exploration on land acquisition among Turkana community in Turkana County.

Table 4.5: How oil exploration activities influences land acquisition among Turkana community in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
Exploration results in displacement of settled communities which leads to communities loosing their land and also their livelihoods.	F	20	9	1	6	0	36	4.2
	%	55.6	25	2.8	16.7	0	100	83.9%
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	F	16	14	3	3	0	36	4.2
	%	44.4	38.9	8.3	8.3	0	100	83.9%
Exploration results into migration of people into a mine area leading to influx of people. With this influx of newcomers, disputes have arisen over land and the sharing of benefits	F	14	12	8	2	0	36	4.1
	%	38.9	33.3	22.2	5.6	0	100	81.1%

From the findings, 83.9% of the respondents observed that exploration results in displacement of settled communities which leads to communities loosing their land and also their livelihoods. 83.9% of the respondents acknowledged 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 while 81.1% of the

respondents observed that exploration results into migration of people into a mine area leading to influx of people. With this influx of newcomers, disputes have arisen over land and the sharing of benefits.

This shows that a majority of the respondents at 83.9% 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 Geographic's 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.

4.1.6 The effects of oil exploration activities on health among the Turkana community in Turkana County

Table 4.6: The effects of oil exploration activities on health among the Turkana community in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
Marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations	F	16	12	7	1	0	36	4.2
	%	44.4	33.3	19.4	2.8	0	100	83.9%
The greenhouse emissions due to exploratory activities affects the health of the Turkana people	F	12	11	10	0	0	36	4.1
	%	41.7	30.6	27.8	0	0	100	82.2%
Exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects	F	19	8	3	6	0	36	4.1
	%	52.8	22.2	8.3	16.7	0	100	82.2%

83.9% of the respondents observed that marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations. 82.2% of the respondents note that the greenhouse emissions due to exploratory activities affect the health of the Turkana people while 82.2% also observe that exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects.

From the findings, it is apparent that a majority of the respondents at 83.9% were of the view that marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations. Being marginalised communities living in this areas do not have access to clean water and proper medical care as a result they are very susceptible to diseases and are likely to be severely affected due to lack of medical care.

This study concurs with the study by Oyonde Opore (2009) who found out that marginalized communities are particularly vulnerable to diseases as a result of any external activities carried out in the area. Oyonde found out that external activities such as mineral exploration, infiltration of refugees and cattle rustling were the major players in the spread of diseases in these communities. According to his study the lack of adequate rain and the hospitals is also another major contributor to the spread of diseases.

4.1.7 How oil exploration activities influences education of Turkana Community in Turkana County

Table 4.3: How oil exploration activities influences education of Turkana Community in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
There is more development of learning institutions that are used in educating the communities therefore empowering More Turkana people have become literate as a result of exploratory projects	F	7	16	4	7	2	36	3.5
	%	19.4	44.4	11.1	19.4	5.6	100	70.6%
Government policy on exploratory activities and the education of the Turkana people is weak	F	9	14	7	3	3	36	3.6
	%	25.0	38.9	19.4	8.3	8.3	100	72.8%
	F	10	11	7	7	1	36	3.6
	%	27.8	30.6	19.4	19.4	2.8	100	72.2%

The findings indicate that 70.6% of the respondents were of the view that there was more development of learning institutions that are used in educating the communities therefore empowering them. 72.8% of the respondents observed that more Turkana people have become literate as a result of exploratory projects while 72.2% of the respondents noted that Government policy on exploratory activities and the education of the Turkana people is weak.

This findings show that majority of the respondents at 72.8% observed that the literacy level of the residents of Turkana has gone up with the influx of exploratory projects in the county.

This study concurs with the findings in a study on oil exploration in Nigeria by Obi Ouno(2004) which found out that oil explorations opened up regions for learning institutions so that learners learn and thus develop marginalised regions. This study explored the impact of oil exploration activities in the delta state and observed that the state had more and better schools on average as compared to other states in Nigeria.

4.1.7 The influence of oil exploration activities on infrastructural development in Turkana County

Table 4.4: The influence of oil exploration activities on infrastructural development in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
Exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems and electricity	F	19	12	4	1	0	36	4.4
	%	52.8	33.3	11.1	2.8	0	100	87.2%
There are no clear cut policies by the government on sustainable exploitation of oil projects for regional development	F	12	12	10	1	1	36	3.9
	%	33.3	33.3	27.8	2.8	2.8	100	78.3%
Political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment	F	13	15	5	3	0	36	4.1
	%	36.1	41.7	13.9	8.3	0	100	81.1%

87.2% of the respondents observed that exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems and electricity while 78.3% were of the view that there are no clear cut policies by the government on sustainable exploitation of oil projects for regional development. On the other hand, 81.1% of the respondents observed that political

interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment.

This study concurs with the findings in a study on oil exploration in Nigeria by Obi Ouno(2004) which found out that oil explorations opened up regions through the development of infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems and electricity. This study explored the impact of oil exploration activities in the delta state and indicated that the region had developed more infrastructure as a result of oil exploration activities.

4.1.9 The effect of oil exploration activities on environmental sustainability

Table 4.5: The effect of oil exploration activities on environmental sustainability

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
There is expansive land degradation as a result of exploratory projects	F	16	13	3	3	1	36	4.1
	%	44.4	36.1	8.3	8.3	2.8	100	82.2%
The Turkana community's ecosystem has been disrupted due to exploratory projects	F	17	10	4	3	2	36	4.0
	%	47.2	27.8	11.1	8.3	5.6	100	80.6%
Oil exploratory projects have led to increased air pollution	F	17	7	6	5	1	36	3.9
	%	47.2	19.4	16.7	13.9	2.8	100	78.9%

The table above shows that majority of the respondents agreed that 82.2% agreed that there is expansive land degradation as a result of exploratory projects. This was followed by 89.6% who agreed that the Turkana community's ecosystem has been disrupted due to exploration projects. 78.9% agreed that Oil exploration projects have led to increased air pollution.

This findings were similar to those by hammud Haris(2009) who explored the effects of oil exploration in Unit state South Sudan. According to his findings oil exploration brought about expensive land degradation which the local communities could not manage.

4.2 Findings from Employees

4.2.1 Background Information

The researcher sought to establish the background information of the residents. The findings were determined and presented as below.

4.2.2 Gender of the Respondents

The researcher sought to determine the gender of the respondents and was presented in the below table.

Table 4. 10: Gender

Gender	Frequency	Percentage
Male	4	44
Female	5	56
Total	9	100

Source: Research Data (2014)

The findings indicate that 55.6% of the respondents were female while 44.4% of the respondents were male. This shows that although female respondents were many compared to male, the spread of the respondents was valid enough for the study since from the findings, there was no biasness towards either gender.

4.2.3 Age of the respondents

The researcher sought to determine the age of the respondents. This was determined and presented in the table below.

Table 4.11 Age of respondents

Age	Percentage
20-35	0
36-40	33.30

40-45	0	0
46-50	2	22.20
Over 50	4	44.40
Total	9	100

Source: Research Data (2014)

The findings indicate that 44.4% of the respondents were over 50 years, 33.3% of the respondents were between 36-40 years, and 22.2% of the respondents were between 46-50 years. This indicates that a majority of the respondents were over 50 years. This shows that the respondents were old enough to have had experience on the impacts of the several exploration projects in their socio-economic development. Thus this was valid information that the sample selected was valid enough in terms of age spread and representation to carry out the study.

4.2.4 Level of education of the respondents

The researcher determined the level of education of the respondents and the results are presented in the table below.

Table 4.12 Level of education of the respondents

Educational Level	Frequency	Percentage
O level	0	0
Diploma	0	0
Degree	5	56
Masters	4	44
Others	0	0
Total	9	100

Source: Research Data (2014)

From the findings, 55.6% of the respondents were of a degree level, while 44.4% of the respondents were of a master's level.

4.1.5 Level of Work Experience of the Respondents

The researcher opted to establish the tribe of the respondents and the findings are presented in the table below.

Figure 4.13: Level of Work Experience of the Respondents

Experience	Frequency	Percentage
Less than 5 years	0	0
Between 6-10 years	5	55.60
Between 11-15 Years	1	11.10
Over 15 years	3	33.30
Total	9	100

Source: Research Data (2014)

The findings indicate that there is an even spread in terms of age of the employees of exploration firm since 55.6% of the respondents were between 6-10 years, 33.3% of the respondents were Over 15 years experience. Further, 11.1% of the respondents had between 11-15 years experience.

4.1.6 How oil exploration activities influences land acquisition among Turkana community in Turkana County

The researcher sought to establish the effects of oil exploration on land acquisition among Turkana community in Turkana County.

Table 4.14: How oil exploration activities influences land acquisition among Turkana community in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
Exploration results in displacement of settled communities which leads to communities losing their land and also their livelihoods.	F	0	1	1	5	2	9	2.11
	%	0	11	11	56	22	100	42.2%
Involuntary resettlement can be	F	1	1	1	5	1	9	2.6

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	%	11	11	11	56	11	100	51.1%
Exploration results into migration of people into a mine area leading to influx of people. With this influx of newcomers, disputes have arisen over land and the sharing of benefits	F	1	1	2	2	3	9	2.4
	%	11	11	22	11	33	100	48.9%

From the findings, 51.1% of the respondents acknowledged 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. 42.2% of the respondents observed that exploration results in displacement of settled communities which leads to communities losing their land and also their livelihoods while 48.9% of the respondents observed that exploration results into migration of people into a mine area leading to influx of people. With this influx of newcomers, disputes have arisen over land and the sharing of benefits.

This shows that a majority of the respondent's at 51.1% acknowledged 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 Geographic's 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.

4.1.7 The effects of oil exploration activities on health among the Turkana community in Turkana County

Table 4.15: The effects of oil exploration activities on health among the Turkana community in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
Marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations	F	1	0	2	3	3	9	1
	%	11	0	22	33	33	100	20%
The greenhouse emissions due to exploratory activities affects the health of the Turkana people	F	0	0	0	2	7	9	1.4
	%	0	0	0	22	78	100	24%
Exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects	F	7	0	0	1	1	9	4.3
	%	78	0	0	11	11	100	87%

From the study, 87% also observe that exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects. 24% of the respondents note that the greenhouse emissions due to exploratory activities affect the health of the Turkana people while 20% of the respondents observed that marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations. From the findings, it is apparent that a majority of the respondents at 87% also observe that exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects.

This study concurs with the study by Koech (2009) who found out that marginalized communities are particularly vulnerable to diseases as a result of any external activities carried out in the area. Oyonde found out that external activities such as mineral exploration, infiltration of refugees and cattle rustling were the major players in the spread of diseases in these communities. According to his study the lack of adequate rain and the hospitals is also another major contributor to the spread of diseases.

4.1.16 How oil exploration activities influences education of Turkana Community in Turkana County

Table 4.8: How oil exploration activities influences education of Turkana Community in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
There is more development of learning institutions that are used in educating the communities therefore empowering them	F	2	7	0	0	0	9	4.2
	%	22	78	0	0	0	100	84.4%
More Turkana people have become literate as a result of exploratory projects	F	0	6	3	0	0	9	3.7
	%	0	67	33	0	80	100	73.3%
Government policy on exploratory activities and the education of the Turkana people is weak	F	7	2	0	0	0	9	4.8
	%	78	14	0	0	0	100	95.5%

The findings indicate that 95.5% of the respondents noted that Government policy on exploratory activities and the education of the Turkana people is weak. 84.4% of the respondents were of the view that there was more development of learning institutions that are used in educating the communities therefore empowering them while 73.3% of the respondents observed that more Turkana people have become literate as a result of exploratory projects. This findings show that majority of the respondents at 95.5% of the respondents noted that Government policy on exploratory activities and the education of the Turkana people is weak.

This study concurs with the study done by Jack Wellman(2013) who found out that government policies were the major influence on communities in areas that oil were being explored in the horn of Africa. The study considered government policies in Kenya, Uganda, Sudan and Ethiopia in line with Oil exploration activities.

4.1.17 The influence of oil exploration activities on infrastructural development in Turkana County

Table 4.9: The influence of oil exploration activities on infrastructural development in Turkana County

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
Exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems and	F	3	4	2	0	0	9	4.1
There are no clear cut policies by the government on sustainable exploitation of oil projects for regional development	%	33	44	22	0	0	100	82.2%
Political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment	F	4	3	2	0	0	9	4.2
	%	44	33	22	0	0	100	84.4%
	F	7	1	0	1	0	9	4.6
	%	78	11	0	11	0	100	91.1%

The finding of the study reveals that, 91.1% of the respondents observed that political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment. 84.4% were of the view that there are no clear cut policies by the government on sustainable exploitation of oil projects for regional development while 82.2% of the respondents observed that exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems and electricity

The findings of this study were similar to those in a study by Yar Deng (2013), who studied the effect of oil exploration activities in Sudan's dafur region found that political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment. This implies that government has a major role to play in how exploration companies impact on the local communities.

4.1.18 The effect of oil exploration activities on environmental sustainability

Table 4.10: The effect of oil exploration activities on environmental sustainability

Key: F: Frequency, %: Percentage, 5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree, T: Total, M: Mean

Statements		5	4	3	2	1	T	M
There is expansive land degradation as a result of exploratory projects	F	1	2	4	2	0	9	3.2
	%	11	22	44	22	0	100	64.4%
The Turkana community's ecosystem has been disrupted due to exploratory projects	F	0	3	1	4	2	9	2.8
	%	0	3	11	4	22	100	55.6%
Oil exploratory projects have led to increased air pollution	F	0	0	0	6	3	9	1.7
	%	0	0	0	67	33	100	33.3%

The table above shows that majority of the respondents 64.4% agreed that there is expensive land degradation as a result of exploratory projects. This was followed by 55.6% who agreed that the Turkana community's ecosystem has been disrupted due to exploration projects. 33.3% agreed that Oil exploration projects have led to increased air pollution.

This findings were similar to those by hammud Haris(2009) who explored the effects of oil exploration in Unit state South Sudan. According to his findings oil exploration brought about expensive land degradation which the local communities could not manage.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, the conclusions from the findings and recommendation.

5.2 Summary of the Findings

5.2.1 Summary of Findings from the Residents

From the findings,(Table 4.5) 83.9% of the respondents observed that exploration results in displacement of settled communities which leads to communities loosing their land and also their livelihoods. 83.9% of the respondents acknowledged 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.

From Table 4.6, 83.9% of the respondents observed that marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations. 82.2% of the respondents note that the greenhouse emissions due to exploratory activities affect the health of the Turkana people while 82.2% also observe that exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects.

The findings (Table 4.7) indicate that 70.6% of the respondents were of the view that there was more development of learning institutions that are used in educating the communities therefore empowering them. 72.8% of the respondents observed that more Turkana people have become literate as a result of exploratory projects while 72.2% of the respondents noted that Government policy on exploratory activities and the education of the Turkana people is weak.

From Table 4.8, 87.2% of the respondents observed that exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems and electricity while 78.3% were

of the view that there are no clear cut policies by the government on sustainable exploitation of oil projects for regional development. On the other hand, 81.1% of the respondents observed that political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment.

The table 4.9, shows that majority of the respondents agreed that 82.2% agreed that there is expensive land degradation as a result of exploratory projects. This was followed by 89.6% who agreed that the Turkana community's ecosystem has been disrupted due to exploration projects. 78.9% agreed that Oil exploration projects have led to increased air pollution

5.2.2 Summary of Findings from Employees

From the findings, (Table 4.14), 51.1% of the respondents acknowledged 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. 42.2% of the respondents observed that exploration results in displacement of settled communities which leads to communities losing their land and also their livelihoods while 48.9% of the respondents observed that exploration results into migration of people into a mine area leading to influx of people. With this influx of newcomers, disputes have arisen over land and the sharing of benefits.

From the study, (Table 4.15), 87% also observe that exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects. 24% of the respondents note that the greenhouse emissions due to exploratory activities affect the health of the Turkana people while 20% of the respondents observed that marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations. From the findings, it is apparent that a majority of the respondents at 87% also observe that exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects.

The findings (Table 4.16), indicate that 95.5% of the respondents noted that Government policy on exploratory activities and the education of the Turkana people is weak. 84.4% of the respondents were of the view that there was more development of learning institutions that are used in educating the communities therefore empowering them while 73.3% of the respondents observed that more Turkana people have become literate as a result of exploratory projects.

The finding of the study (Table 4.17) reveals that, 91.1% of the respondents observed that political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment. 84.4% were of the view that there are no clear cut policies by the government on sustainable exploitation of oil projects for regional development while 82.2% of the respondents observed that exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems and electricity.

The table 4.18 shows that majority of the respondents 64.4% agreed that there is expensive land degradation as a result of exploratory projects. This was followed by 55.6% who agreed that the Turkana community's ecosystem has been disrupted due to exploration projects. 33.3% agreed that Oil exploration projects have led to increased air pollution.

5.3 Conclusion

This study sought to find out the impacts of oil exploration activities on Turkana as a marginalized community. The Study therefore concludes that oil exploration activities influences land acquisition among Turkana community in Turkana County. This is as a result of settlement of other communities in search of greener pastures in the region and thus influence spur land sales and increase in the cost of acquiring land.

The study also concludes that oil exploration activities have impacts on health among the Turkana community in Turkana County. The study reveals that oil exploration brings in more people and disturbs land formation process and thus causes new disease as a result of pollution or infiltration of people. As the number of people in the region increases the study reveals that there is an increase in the rate of spread of ailments.

The study revealed that oil exploration activities influences education of Turkana Community in Turkana County. According to the study more and more education opportunities are opening up in the community as a result of oil exploration. This is perhaps because the exploration activities has brought in more people who come for work and to do business and therefore increased demand for education and motivated people to set up learning centres in the county.

The study further concluded that oil exploration activities have influenced the development of infrastructure in Turkana County. According to the study more roads and other infrastructures such as security, banking, among others are essential for oil exploration and have thus developed in the county since the beginning of the oil exploration activities in the county.

And finally the study concludes that exploration activities have adverse effects on environmental sustainability. First is pollution as a result of oil drilling which interferes with soil topography and therefore pollutes water ways. The study also reveals that majority of the respondent agreed that oil exploration and a lot of detrimental impacts on the environment.

5.4 Recommendations

The study recommends that the community participation should be considered in making key decisions during oil exploration in Turkana as it has the potential to make suggestions that can reduce the impacts of oil exploration on the communities.

The construction of access roads, either to provide heavy equipment and supplies to the oil exploration site or to ship out processed oil and other mineral, can have substantial environmental impacts, especially if access roads cut through ecologically sensitive areas or are near previously isolated communities. If a proposed oil exploration project involves the construction of any access roads, then the environmental impact assessment (EIA) for the project must include a comprehensive assessment of the environmental and social impacts of these roads.

5.5 Contribution to the body of Knowledge

This study has made contribution to the body of knowledge by finding out the influence of oil exploration projects on the social/economic development of communities in marginalized areas: a case of Turkana community in Kenya.

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APPENDICES

APPENDIX 1: QUESTIONNAIRE FOR COMMUNITY RESIDENTS

I am currently conducting research on the INFLUENCE OF EXPLORATION PROJECTS ON THE SOCIO-ECONOMIC DEVELOPMENT OF MARGINALIZED COMMUNITIES.

I kindly request you to participate in my study and your responses to the items in the questionnaire will be treated with utmost confidentiality, and will not be used for any other purposes except this study.

Please answer each question by writing on the spaces provided or tick (✓) against the boxes provided. The information provided will be used for the purpose of this research only; therefore do not write your name on the answer sheet. Please note that there are no correct or wrong answers.

SECTION A: GENERAL INFORMATION

1. Gender:

Male Female

2. What is your age category?

26-30 yrs 31-35 yrs 36-40 yrs

41-45 yrs 46-50 yrs over 51 yrs

3. What are your academic qualifications?

Certificate Diploma

Degree Other.....

4. Which tribe do you belong?

Turkana Tugen

Porkot Keiyo

Other

SECTION B: SPECIFIC INFORMATION

1. Kindly rate the extent to which you agree with the following statements on influence of oil exploration activities on land acquisition among the Turkana community in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
Exploration results in displacement of settled communities which leads to communities losing their land and also their livelihoods					
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					
Exploration results into migration of people into a mine area leading to influx of people. With this influx of newcomers, disputes have arisen over land and the sharing of benefits.					

2. Kindly rate the extent to which you agree with the following statements on the influence of oil exploration activities on health among the Turkana community in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
Marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations					
The greenhouse emissions due to exploratory activities affects the health of the Turkana people					
Exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects.					

3. Kindly rate the following statements as to the extent to which you agree on the influence of oil exploration activities on the education of the Turkana community in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
There is more development of learning institutions that are used in educating the communities therefore empowering them					
More Turkana people have become literate as result of exploratory projects					
Government policy on exploratory activities and the education of the Turkana people is weak					

4. Kindly rate the following statements as to the extent to which you agree on the influence of oil exploration activities on infrastructural development in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
Exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems, and electricity					
There are no clear cut policies by the government on sustainable exploitation of oil projects for regional development					
Political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment					

5. Kindly rate the following statements as to the extent to which you agree on the influence of oil exploration activities on environmental sustainability

	5	4	3	2	1
There is expansive land degradation as a result of exploratory projects					
The Turkana community's ecosystem has been disrupted due to exploratory projects					
Oil exploratory projects have led to increased air pollution					

APPENDIX II: QUESTIONNAIRE FOR EMPLOYEES

I am conducting research on “**Influence of exploration projects on the socio-economic development of marginalized communities**” as a requirement for the award of a Master degree on Business Administration. I kindly request you to participate in my study. Your responses to the items in the questionnaire will be treated with utmost confidentiality, and will not be used for any other purposes except for academic purposes only. The questionnaire is made up of two sections A and B. Tick to indicate appropriate response.

SECTION A: BACKGROUND INFORMATION

Kindly respond by ticking (✓) where appropriate.

1. Tick to indicate your age

20-30 years

41-50 years

31-40 years

Over 51 years

2. Tick to indicate your gender

Male

Female

3. What is your level of education?

Diploma level

Masters

Degree level

O-level

None

Other specify.....

4. Working experience

Less than 5 years

Between 6-10 years

Between 11-15 years

Over 15 years

SECTION B: SPECIFIC INFORMATION

1. Kindly rate the extent to which you agree with the following statements on influence of oil exploration activities on land acquisition among the Turkana community in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
Exploration results in displacement of settled communities which leads to communities losing their land and also their livelihoods					
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					
Exploration results into migration of people into a mine area leading to influx of people. With this influx of newcomers, disputes have arisen over land and the sharing of benefits.					

2. Kindly rate the extent to which you agree with the following statements on the influence of oil exploration activities on health among the Turkana community in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
Marginalized communities are particularly vulnerable to diseases brought by as a result of exploration operations					
The greenhouse emissions due to exploratory activities affects the health of the Turkana people					
Exploration results in improved health facilities in the region as resources available locally for health services typically increase markedly with the advent of exploration projects.					

3. Kindly rate the following statements as to the extent to which you agree on the influence of oil exploration activities on the education of the Turkana community in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
There is more development of learning institutions that are used in educating the communities therefore empowering them					
More Turkana people have become literate as result of exploratory projects					
Government policy on exploratory activities and the education of the Turkana people is weak					

4. Kindly rate the following statements as to the extent to which you agree on the influence of oil exploration activities on infrastructural development in Turkana County

Key: 5: Strongly Agree; 4: Agree; 3: Undecided; 2: Disagree and 1: Strongly Disagree

	5	4	3	2	1
Exploration projects results to significant infrastructure improvements in the marginalized areas through development of good transport network, water supplies, sanitation systems, and electricity					
There are no clear cut policies by the government on sustainable exploitation of oil projects for regional development					
Political interference, uncertainty and delays in passing laws, energy policies and regulations into law are stifling growth, development and investment					

5. Kindly rate the following statements as to the extent to which you agree on the influence of oil exploration activities on environmental sustainability

	5	4	3	2	1
There is expansive land degradation as a result of exploratory projects					
The Turkana community's ecosystem has been disrupted due to exploratory projects					
Oil exploratory projects have led to increased air pollution					