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***“The Emerging oil industry in Ghana: Socio-economic and Environmental
Impact on the people of Cape Three Points”.***

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May, 2011

ABSTRACT

The management of natural resources has been one of the herculean tasks developing countries with such resources have had to contend with. Experts in the field of natural resource management have expressed divided opinions in connection with the linkage between natural resource abundance and economic growth on one hand and the translation of resource wealth into a sustainable quality of life in a relatively safe environment on the other. For countries to escape a resource curse, pragmatic and strong institutions coupled with political will must be seen to be at full implementation.

This study looked at the emerging oil industry in Ghana with reference to what is to be or being done to alleviate the hardships the people of three local communities have been facing since a ban on fishing within the exclusive zone was imposed. The objective is to examine what prevailing conditions are available to mitigate the effects of the loss of a source of livelihood and assess what mechanisms are there to regulate the behaviour of oil companies.

The results from the data gathered showed that there is a strong commitment on the part of government, oil companies and other stakeholders to turn the expected wind-fall into an economic blessing. However, the opinions expressed by the local residents within the Cape Three Points region shows a lot needs to be done for them not to be worse-off. It is expected that while these three communities are given the needed attention, measures would be put in place to minimize or avoid any environmental problems that may occur.

DECLARATION

I declare that I personally authored this work. As much as possible, all ideas and sources of information have been duly referenced in line with the ethics of academic honesty. I wish to declare emphatically that this work has not been published either in part or whole for the award of any academic degree. I am exclusively responsible for any omissions, errors and weaknesses that might be found in this thesis.

.....

Daniel Arnold Kwesi Manu.

ACKNOWLEDGEMENTS

I am most grateful to the Almighty God for giving me the needed strength and courage to accomplish this course successfully. Baring all the difficulties that came my way while researching into this important topic, I have nothing but just to say His grace has been my driving force.

I am sincerely and deeply thankful to my supervisor, Professor Fred H. Johnsen whose patience and inspiration spared me on to success. All your efforts and suggestions have shaped and given me in-depth knowledge into how natural resources can be managed sustainably.

My special gratitude goes to all my friends especially Elijah Fant Kombian who spared me on for this dream to be realised. May God reward and strengthen you.

I am greatly indebted to my wife, Irene Yaa Manu for her encouragement and support. I must say the tolerance and maturity she demonstrated during my absence boosted my quest to success.

I further express tons of gratitude to Nor agric (Norwegian University of Life Sciences, Ås) for giving me this opportunity to acquire knowledge in this field of study.

Finally, I want to say a big thank you to my informants who gave me valuable support and information to come out with this work.

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May, 2011

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DEDICATION

I dedicate this work to the glory of the Almighty God who opens doors for me when hopelessness surrounds me.

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ABBREVIATIONS USED

CSR.....	Corporate Social Responsibility
D&P.....	Development and Production
E&A.....	Exploration and Appraisal
EHS.....	Environment, Health and safety
E.I.T.I.....	Extractive Industry Transparency Initiative
EMS.....	Environmental Management System
E.P.A.....	Environmental Protection Agency
ESIA.....	Environmental and Social Impact Assessment
F.A.D.....	Fish Aggregating Device
F.D.I.....	Foreign Direct Investment
F.P.S.O.....	Floating Production Storage and Offloading
G.H.G.....	Green House Gas
GOELF.....	Ghana Offshore Emergency Leadership Forum
I.M.F.....	International Monetary Fund
JHS.....	Junior High School
KITE.....	Kumasi Institute of Technology
MARPOL.....	International Convention for the Prevention of Maritime Pollution
MDGs.....	Millennium Development Goals
M.E.S.T.....	Ministry of Environment, Science and Technology
M.L.N.R.....	Ministry of Lands and Natural Resources
M.O.E.....	Ministry of Energy
MSLC.....	Middle School Leaving Certificate
NGO.....	Non-Governmental Organization
OCSP.....	Online Certificate Status Protocol
SHS.....	Senior High School

CHAPTER ONE

1.0 INTRODUCTION

The discovery and extraction of natural resources has brought different consequences to countries that are endowed with such resources. While some of these nations have become economically strong and self sustaining, others have been drawn into serious economic hardships and conflicts. The latter has led to the concept of “resource curse”. There are many countries whose economies largely depend on revenues derived from these natural resources such as diamond, gold, timber, oil, copper, etc.

Proponents of the “resource curse” thesis have it that the citizens of these countries rather suffer from abject poverty, diseases, illiteracy and score very low on the United Nation’s Human Development Index (UNDP, 2006). Most of these countries which are in the southern hemisphere are more prone to conflicts. Nigeria is a classical example of a country that has suffered from this phenomenon. On the African continent alone, Libya, Algeria, Angola, Egypt, Equatorial Guinea, Democratic Republic of Congo, Gabon, Congo, Cameroun and Cote D’Ivoire in addition to Nigeria are all producing some amount of crude oil. Despite this, the revenue that has been derived has not helped to improve the quality of life of their citizens especially those living very close to the drilling sites. For instance, Palley (2003:54) argues that natural resource curse most often “occurs because the income from these resources is often misappropriated by corrupt leaders and officials instead of being used to support growth and development. Moreover, such wealth often fuels internal grievances that cause conflict and wars”.

However, Norway has defied the natural resource curse perception and has been able to build a large reserve of revenue from its oil production. With a sound resource allocation and transparent revenue management of the oil income, Norway has been able to build a model for natural resource management which is often referred to as the Norwegian model of natural resource management.

Having discovered crude oil, Ghana is one of the latest countries to face a huge natural resource management challenge as she will be attempting to better the quality of life of her citizens especially those who will suffer negatively from the activities of the extraction of the crude oil. Local communities living close to the production sites of oil drilling activities all

over the world have in one way or the other suffered pollution of water sources, land or loss of source of livelihood through the oil production. This study takes a look at how this phenomenon is being dealt with in three local communities sited close to the fields where Ghana has discovered its oil resource.

1.1 BACKGROUND TO THE STUDY

Cape Three Points is the southernmost town/part of Ghana. It is located in the Ahanta West District of the Western Region of Ghana. There are several small communities located a few kilometres to Cape Three Points such as Akwadae, Ntakrom and Sanko Junction. These communities are sparsely populated. The inhabitants of these communities are predominantly fishermen. Apart from fishing, farming is another economic activity these villages are engaged in. Cape Three Points also boasts of a beach which has attracted tourists over the years thereby generating some income for the Ahanta West District Assembly.

After a long exploration along its coast, Ghana has finally discovered a large deposit of crude oil estimated to be in millions of barrels. The western coast off Cape Three Points is one of the sites where the wells have been found. In June 2007, Kosmos Energy of the United States, in partnership with Anadarko Petroleum Corporation, Sabre Oil and Gas Ltd., the EO Group, Tullow Ghana Limited and Ghana National Petroleum Company (GNPC) broke the news of the discovery of large deposits of crude oil to the Government of Ghana. The field was later named the 'Jubilee Fields'.

Test drilling commenced a few months later leading to a commercial production which started in the later part of 2010. This discovery sounds generally good to Ghanaians but what remains to be dealt with is the managerial challenge oil discovery has posed to other countries that have not been able to translate the economic gains into an improved quality of life for their citizens. Out of a population of about 22 million (Ghana Statistical Service, 2005), close to 15 million Ghanaians live on just two dollars a day or less (UNDP, 2006).

Due to the production of the crude oil, the communities around Cape Three Points have been barred from fishing in the area. This implies that their major source of livelihood has been taken from them. Meanwhile, it has not been well established with regards to the kind of package that would be made available for these communities not to become worse off as a result of a ban on fishing within the exclusive zone of the Jubilee field and the consequent

effect this will have on other fishing-related economic activities within the catchment area of the oil exploration and drilling.

In addition, oil production comes with a huge environmental challenge especially at a time where climate change and its negative consequences have captured global attention. Unlike land, defining property rights for the use of the sea is rather difficult. Vatn (2005:261) however contends that “undefined or unclear property rights may yield both large conflicts and losses”. The oil found off the coast of Cape Three Points has indeed created a rivalry in the use of the sea. There would be some cost if any of the agents is excluded from the use of the water resource.

The oil drilling infrastructure in the Niger delta in Nigeria has come under attacks by local residents who claim they have not been well compensated for their loss of land and source of livelihood to the oil production. These local residents sometimes damage oil transporting pipelines and set fire to them. Other times, they engaged the government forces, who are deployed to protect oil infrastructure, in warfare and on some occasions taken foreign expatriates hostage. Supporters of the local residents quote the African Charter on Human and People’s Rights Article #21(OAU, 1981:7) to back their actions. Three clauses in the Charter read:

- All peoples shall freely dispose off their wealth and natural resources. This right shall be exercised in the exclusive interest of the people. In no case shall a people be deprived of it.
- In case of spoliation, the dispossessed people shall have the right to the lawful recovery of its property as well as to an adequate compensation.
- States parties to the present Charter shall undertake to eliminate all forms of foreign economic exploitation particularly that practiced by international monopolies so as to enable their peoples to fully benefit from the advantages derived from their national resources.

If this Charter is anything to go by then the local communities along Cape Three Points have to be compensated in a way that will not make them worse off since they have to give up their source of livelihood. One way could have been an agreement for the oil companies to give employment to the residents but this may not materialise since most of the residents have not had education and training in oil extraction.

However, in line with the Growth and Poverty Reduction Strategy (GPRS) government, working through the District Assembly is expected to find an alternative source of livelihood for the communities along the Cape Three Points or work out a sustaining compensation package for the local residents which will enable them change their source of income while tranquillity prevails over the extraction of this all important natural resource seen by many Ghanaians as the means by which their quality of life would be improved and sustained.

1.2 STATEMENT OF THE PROBLEM

Natural resource management has posed a challenge to several nations. Countries such as Nigeria, Angola, Equatorial Guinea and Cameroun have been drilling some crude oil on their continental shelves over some years now. Instead of being a blessing and boosting their economies, the local residents along the site of drilling have become poorer thereby developing hostile attitudes to the operations of the oil companies.

Moreover, the environment around the well sites is becoming polluted through spillage of oil and gas flaring. These can have adverse consequences on the health of the people. In addition, the pollution will not only affect the ecosystem of the environment but can also cause loss of fish in the sea and generate local and international conflicts.

In most cases, agreements governments of these oil-producing countries sign with the multinational oil companies do not adequately factor the livelihood of local residents into the agreements. In the Cape Three Points oil discovery for example, local chiefs together with civil society organizations have started calling on the government not to overlook the plight of the local residents since any attempt made in that direction can create acrimony between the local residents and the oil companies.

To consider the needs of the local residents, Ghana has to review its legal framework, specifically the Petroleum Exploration and Production Law passed in 1984 to reflect transparency in the management of the oil as well as adequately compensating local residents whose source of livelihood would be affected. Under the existing law, companies involved in the exploration and production of oil are to pay royalties of 5 per cent to the government as well as interest and income tax of 35 per cent (Accra Daily Mail, 2008). At this rate, the country as a whole stands at a disadvantage as a beginner in the industry compared to Norway's 78% petroleum tax on oil companies when actual production started in the early 1970s (Statoil, 2009).

Just like the case of gold mining, it has been speculated that government will connive with the oil companies and not have any pragmatic corporate social responsibility mechanism put in place to make sure that aside the oil income, there would be other alternative sources of livelihood for local residents. This study seeks to find out how government is going to deal with the “natural resource curse” assumption as well as how the local residents are coping with and adapting to their present situation. The study will also explore how perceived environmental problems stemming from the oil drilling would be handled so as to prevent any adverse effects on the health of the local residents.

1.3 OBJECTIVES AND RESEARCH QUESTIONS

The objectives of this study revolve around the local residents’ adaptation to an institution and the perceived “business as usual” behaviour of oil companies as against the health of local residents and the ecosystem as a whole. The study therefore has two objectives to investigate:

- To study whether there are prevailing conditions that would mitigate the effects of less or non-fishing opportunities for the local fishermen.
- To assess whether there is a strong and sustainable framework that would guide the behaviour of oil companies as far as environmental pollution is concerned.

From the objectives stated above, the following research questions were used to elicit information.

Objective 1:

- Do the local people have the capacity for adaptation to a threatened source of livelihood?
- What coping strategies are being employed for a short-term survival?

Objective 2:

- What regulatory mechanisms are there to be followed in order to curb ecosystem destruction?
- Do national institutions have the necessary mandate and capacity to enforce compliance of environmental laws involving oil and gas production?

1.4 SIGNIFICANCE OF THE STUDY

Natural resource management has been a subject of increasing debate particularly in countries whose economies rely on natural resource extraction and export. As countries find new grounds and discover new natural resources, it is expected that their economies would receive a boost which will translate into better living conditions for their citizens. This study takes a look at how a new natural resource discovery would impact on the lives of people living close to the catchment area in economic and environmental terms.

Just like other publications have done, it is to add to the existing stock of literature on natural resource management. Specifically, the study takes an in-depth look at how local residents would be catered for differently from how communities in other natural resource zones have been treated. It also explores the strengths and weaknesses of institutions of natural resource management in Ghana and to stimulate future debate and research on Ghana's oil find and economic development.

1.5 DESCRIPTION OF THE STUDY AREA

1.5.1 Geographical Location and Population Structure of Study Area

Cape Three Points is one of the few communities in the Western Region in Ghana that has gained local and international recognition due to the discovery of oil. It is also the southernmost part of Ghana. However, there are other communities located a few kilometres apart such as Sanko Junction and Ntakrom. This study centres on Cape Three Points, Sanko Junction and Ntakrom. They are all located in the Ahanta West District of the Western Region of Ghana.

These communities are about three to four kilometres apart and are sparsely populated. Available statistics indicates that the Ahanta West District had a total population of 95,140 out of which 51.6 percent constitutes females and covers 2.5 square kilometres (2.5 km²) of the total land area of the Western Region of Ghana (Ghana Statistical Service, 2000:14). Majority of the district inhabitants live in towns that have more social facilities. Some of these are Agona Nkwanta, Busua, Dixcove, Princess Town and Egyabra. The actual population size of these three communities could not be determined since most of the residents do not reside in the communities all the time. This is due to the make-shift nature of jobs the people are engaged in which is predominantly fishing.



1.5.2 Economic Activities of Residents

The main occupation of most residents of these communities has been fishing. There are others who are self-employed in fishing-related activities such as boat building, fish mongering and net mending. Subsistence food crop farming is practiced on a low scale. The peak season for bumper catches is within the months of July to October of every year. For the rest of the months, catches are relatively very low. Fishermen, at this time are engaged in other businesses to have a sustainable life. By this, their sources of livelihood are diversified. However, some residents have other businesses that generate income in other towns where they migrated from. According to the president of the fishermen’s association of the area, there are about 150 registered members of the association but many of them are migrants to the area (interview). The map below shows the location of Cape Three Points, Ntakrom and Sanko Junction.



Figure 1 - Map showing the location of the communities under this study.

Source: <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=180464>

- Key:  Cape Three Points
 Ntakrom and Sanko Junction

1.6 HISTORY OF OIL EXPLORATION IN GHANA

Ghana is set to join the league of oil producing countries by the close of 2010. However, prospecting for oil and gas begun in Ghana as far back as 1897 (KITE, 2008). On the basis of its geological nature, Ghana has four sedimentary basins which include the Western basin (Tano-Cape Three Points Basin), Central Basin (Saltpond Basin), Eastern Basin (Accra- Keta Basin) and Inland Voltaian Basin (Boateng, 2008). Early studies of rocks underlying the surface of most lands or soil surfaces in Ghana revealed strata of sediments. This revelation gave a high possibility that there could be the discovery of oil and gas deposit in Ghana in commercial quantities.

The history of oil and gas exploration can be classified into four distinct phases due to various factors among which science and technological advancement and political interventions feature prominently. Phase one dealt mainly with Onshore Exploration and lasted between 1896 and 1969. The second phase concentrated on Offshore Exploration and it took place between the years 1970 and 1984. These exploration activities were done by foreign companies who had the technological know-how and the resources. In 1985, the Ghanaian government saw the need to get involved in the exploration activities by establishing the Ghana National Petroleum Corporation (GNPC) to be at the fore-front of how the nation can be represented. This mandate which is the third phase ended in 2000.

From 2001 to date, the fourth phase, the GNPC was restructured and resourced to focus more on its core function of collaborating and facilitating the search for commercial quantities of hydrocarbon deposits and subsequent extraction. The staff had to undergo retraining while modern gadgets and equipment had to be procured. To ensure that GNPC became very well empowered to carry out its functions, it was upgraded to a company status to make it semi-autonomous.

Oil and gas exploration as stated in the first phase started around the onshore Tano basin after oil and gas seepages were discovered by early explorers (Khan, 1970). Though there was no proper understanding of seismic data by then, it attracted some companies who began to drill wells with the view of discovering oil and gas in commercial quantities. According to Boateng (2008: 2), five wells (WAOFCO – 1, 2, 3, 4, 5) were drilled by West Africa Oil and Fuel Company within a five year period with the second sinking of wells resulting in a discovery. This was documented after it produced an estimated 5 barrels per day (5 bopd) at a total depth of 35 metres.

In 1909, a French company, Société Française de Petrole, sunk six wells at an average depth of between 12- 17 metres and this produced 7 barrels of oil per day (bopd). This progressive achievement attracted more companies such as African and Eastern Trade Corporation and Gulf Oil Company to begin the acquisition of licences to do more exploration. By the year 1956, the Gulf Oil Company sank four wells and encountered non-commercial quantities at various depths. Table 1 shows the activities of the Gulf Oil Company around the Onshore Tano Basin.

Table 1 - EXPLORATORY ACTIVITIES OF GULF OIL COMPANY

Well Name	Spudded Date	Well Type	Operator	Location	Basin	Total Depth (FT)
Kobnaswaso -1	29/06/56	Exploration	Gulf Petroleum	Onshore	Tano	10660
Epunsa -1	26/12/56	Exploration	Gulf Petroleum	Onshore	Tano	6791
Bonyere -1	02/05/57	Exploration	Gulf Petroleum	Onshore	Tano	8190
Kobnaswaso -2	27/09/57	Exploration	Gulf Petroleum	Onshore	Tano	4513

Source: *Boateng, M.O (2008)*

More exploratory activities went on and are still ongoing in the other basins in an attempt to find oil and gas deposits in commercial quantities but this study concentrates on the Tano basin. Though exploratory activities started way back in the late 1890s, it was not until in the 1950s that significant strides were made towards major discoveries. During the third phase of exploratory activities, some renowned oil companies got attracted to the potentials Ghana has in becoming an oil producing country. Though offshore drilling is considered relatively dangerous and more expensive, it did not deter further search for hydrocarbons. In 1997 and 1998 for example, Hunt Oil Company and Nuevo Energy Company sank wells in the deep waters off the west coast of Cape Three Points to a depth of 252 feet and 170 feet respectively

(Boateng, 2008). Other companies such as Atlantic Richfield Company Limited, Philips Petroleum, Petro Canada International Assistance Corporation (PCIAC) and Ghana National Petroleum Corporation (GNPC) did some exploratory and appraisal drillings following the progress that was made by earlier companies. In the last ten years, the current phase of exploration of oil and gas in Ghana, giant strides have been made and this led to the discovery of commercial quantities of oil and gas off the west coast of Cape Three Points. This time saw the inclusion of Kosmos Energy, Tullow Energy, Norsk Hydro and Gas, Hess Corporation, Anadarko and the E.O Group joining in the exploratory expedition.

In the last twenty years, exploration for oil and gas has changed drastically. At the time exploration started in Ghana, the only way of locating petroleum-bearing rocks either onshore or offshore was to search for the evidence of seepages on land or water/sea surface. This is followed by sinking of wells to determine whether a seepage could indeed give a clue to oil and gas deposits. With the growing demand for petroleum products worldwide, improved technology has helped to make exploration and discovery more reliable and accurate. The use of seismology, though capital intensive, led to the discovery of the “hyedua¹” and “mahogany²” wells in the “Jubilee fields³” and the Deep water Tano basin where the Tweneboa and Odum wells are located. Figure 2 shows the location of the wells in the Jubilee Fields.

¹ Hyedua is a name given to one of the wells in the Jubilee fields.

² Mahogany is also the name of a well for development of commercial oil and gas.

³ Ghana celebrated its 50th anniversary of independence in 2007; the same year commercial quantities of oil and gas were discovered. Hence the oil field has been named the “Jubilee fields”.

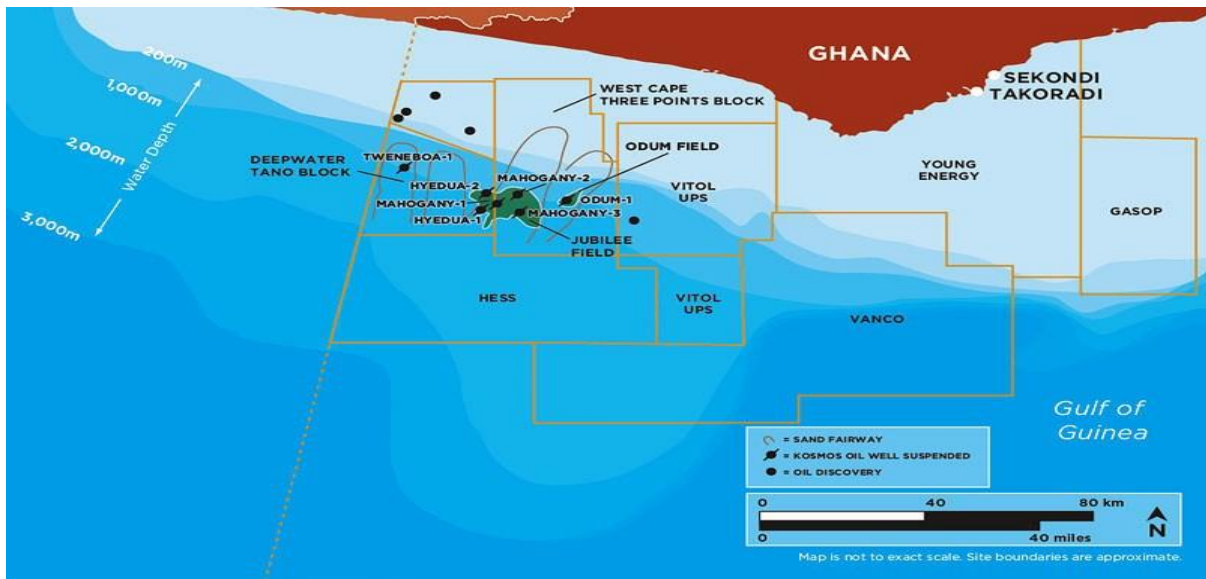


Figure 2 - The location of the Jubilee field and its wells

Source: <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=186848>

A number of companies have applied for licences and concessions to begin the development of the Jubilee field for production to begin by the close of 2010 while exploration for more hydrocarbons continues. These include Kosmos Energy, Tullow Ghana Limited, Anadarko, Vanco, Lukoil, Hess Corporation, Vitol, Gasop, Afren and Celtique companies. In view of what the companies are specialised in, Tullow appears to be the main company to spearhead the drilling of oil at this time. On the basis of the concessions that have been granted, Kosmos Energy Ghana Limited holds a significant share just as Tullow Ghana Limited does. By percentage composition of the Jubilee fields, Anadarko accounts for a 30.875%, Kosmos Energy 30.875%, Tullow 22.896%, Sabre Oil & Gas 1.854%, the E.O Group 3.5% and Ghana National Petroleum Company 10%.

Furthermore, licenses and concessions have been granted to the following companies on the basis of percentages in the Deep Water Tano basin for well development and further exploration. Table 2 shows the percentage stake holding in the Jubilee field.

Table 2 - PERCENTAGE STAKE HOLDINGS BY COMPANIES IN THE JUBILEE FIELD

Name of Company	Percentage holding (%)
Anadarko	18
Tullow Ghana Limited	49.955
Sabre Oil and Gas	4.045
Kosmos Energy	18
Ghana national Petroleum Company (GNPC)	10

Total	100.000
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Source: The Ghanaian Chronicle, 2010.

Separate publications by the World Bank (WB) and the International Monetary Fund (IMF) give an estimate of what Ghana is expected to earn in revenue from the Jubilee field by the year 2029. Table 3 presents the IMF and WB projected estimated income from the Jubilee field.

Table 3 - WB/IMF PROJECTED ESTIMATES OF REVENUE FROM THE JUBILEE FIELD

		Projected Oil Annual Revenues from Jubilee field (in US\$ millions)
Year of Production	IMF Estimates	World Bank Estimates
2011	752	900
2012	723	1,011
2013	1,324	1,083
2014	1,326	1,484
2015	1,352	1,796
2016	1,428	1,804
2017	1,457	1,587
2018	1,485	1,400
2019	1,553	1,213
2020	1,491	1,053
2021	1,491	946
2022	1,491	839
2023	1,176	759
2024	925	706
2025	723	652
2026	562	599
2027	433	546
2028	330	519
2029	247	492
TOTAL	20,269	19,390

Table 3: Estimated income from the Jubilee field.

Source: IMF, 2008 and World Bank, 2009.

The total figures estimated by the IMF and the World Bank give an impression that Ghana will rip a windfall of revenue into its economy in the next nineteen years. This is expected to compliment the revenues that are generated from the other sectors of the economy in a bid to improve the standard of living and quality of life of Ghanaians. However, the fulfilment of this depends on how well the revenue is managed.

1.7 POVERTY REDUCTION STRATEGIES IN GHANA

Ghana has undergone various programmes and strategies to reduce poverty and deprivation among her citizens. Notable among them are the “Operation Feed Yourself” in the 1970s, “Structural Adjustment Programme” in the 1980s, and the “Ghana Poverty Reduction Strategy” of the 1990s. Currently, the most important and significant is the “Millennium Development Goals” which is being used as the yardstick to determine the well-being of not only Ghanaians but also citizens of several other developing countries. Though it is a national agenda, the responsibility of the achievement of these goals mostly lies in the hands of District, Municipal or Metropolitan Assemblies who implement government policies at the grassroots level.

District, Municipal or Metropolitan Assemblies⁴ are expected to use their share of the Assemblies’ Common Fund⁵ (disbursed from the central Government) to initiate community projects that will be of benefit to the local residents. This therefore implies that the Ahanta West District Assembly has the task of making sure that the people within the district are well cared for including the people of Cape Three Points, Sanko Junction and Ntakrom.

Because of this widely held view, the welfare of communities located close to the drilling and production site are rarely discussed at the nation level. Nevertheless, a number of considerations are given before the allocations are made to the Assemblies. This may include population size, and the needs of the District, Municipality or Metropolis.

1.8 ORGANIZATION OF THE THESIS

This thesis is organised into five chapters. Chapter one provides an introduction in which the background is captured. Also captured in chapter one is the statement of the problem, objectives and research questions, significance of the study and description of the study area.

⁴ For administrative purposes, Ghana has been put into a local governance structure that sees to the administrative issues within an administrative area. This is called the District, Municipal or Metropolitan Assembly. It is headed by a District Chief Executive who represents the President at that level.

⁵ The District Assemblies’ Common Fund (DACF) is a pool of resources created under section 252 of the 1992 Constitution of Ghana constituting a minimum of 5% of the national revenue set aside to be shared among all District Assemblies in Ghana with a formula approved by parliament. It is a development fund and enables Ghana’s wealth to be accessible to all citizens.

Chapter two dealt with the theoretical framework, livelihoods and the rural poor, types of capital, environmental impact assessment of drilling site and natural resource management. Chapter three treated research methodology including research strategy, design and method, qualitative methodology and its limitations and sampling procedures used. Chapter four presented, analysed and discussed the findings while chapter five winded up with conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

The welfare of human beings either as individuals or in communities is often said to be the most important consideration for people who are given decision-making opportunities. Interactions between different agents produce different reactions and results. In an attempt to capture the interactions in context and draw a valid conclusion to the results of the interactions, theories on human well-being have been used in this study in relation to natural resource management and Sustainable Livelihood Approaches. The main focus is on resource regimes and Alternative Livelihood opportunities to poverty reduction. Scholars of natural resource management have argued that natural resource abundance has not yielded the expected benefits to citizens of countries which are endowed with natural resources. This chapter reviews literature on these cases but takes a specific look at what Ghana should expect in the wake of its oil find.

2.1 THEORITICAL FRAMEWORK

Prior to the discovery of the crude oil, the sea was governed by the open access regime where local fishermen more or less had a right to the use of the sea and this was uninhibited. After the discovery of oil and gas in commercial quantities, government introduced an institution that has curtailed the rights of the local fishermen. North (1990:3) cited in Vatn (2005:10) defines institutions “as the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction”. The local fishermen have been banned from fishing in the sea off West Cape Three Points. This has become necessary since the drilling activities are concentrated offshore.

Vatn’s framework for analysing resource use problems identifies a number of issues that should be considered in analysing problems that might arise should local residents be excluded completely from fishing in the area without a sustaining alternative source or opportunities of livelihood. Oil operations have a long period within which the production lasts. The operationalization of this theory is guided by the hypothesis that:

the exclusion of local communities in the decision-making process in natural resource management breeds mistrust and triggers conflicts.

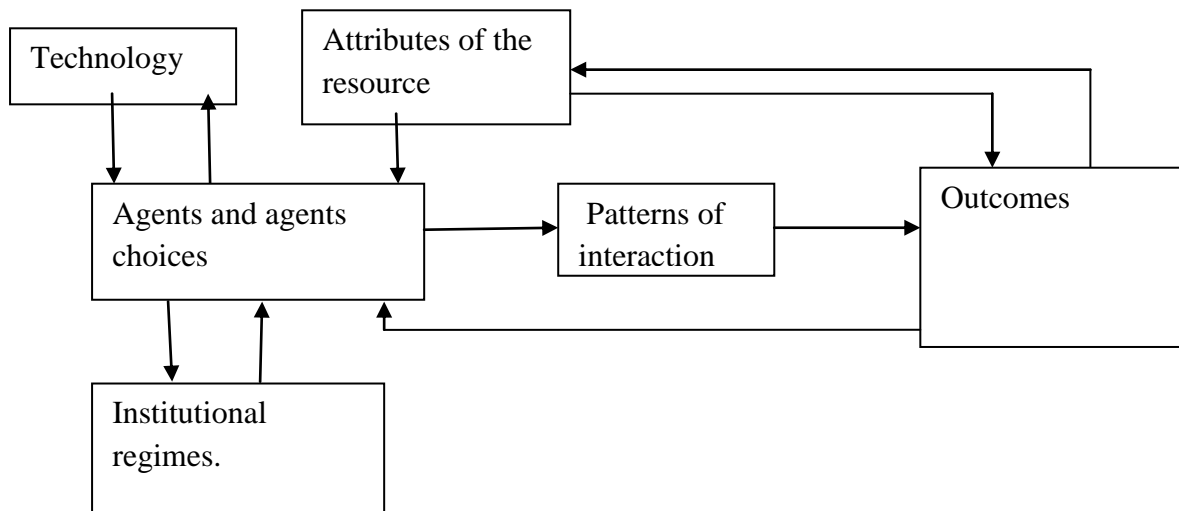


Figure 3 - Framework for analyzing resource use problems. Source: (Vatn, A, 2005:283)

Article 275 (6) of the 1992 Fourth Republican Constitution of Ghana states:

Every mineral in its natural state in, under or upon any land in Ghana, rivers, streams, water courses throughout Ghana, the exclusive economic zone and any area covered by the territorial sea or continental shelf is the property of the Republic of Ghana and shall be vested in the President on behalf of, and in trust for the people of Ghana.

This constitutional provision makes it categorically clear that should any natural resource be discovered anywhere within the territorial jurisdiction of Ghana, no one person, community or district can claim ownership and exclusive right of it. This also means that in such an event, the national interest overrides the individual or community interest. The constitution therefore sets the tone for the introduction of an institution. Crude oil and gas have the attributes of capital intensity in their extraction. It also requires the use of sophisticated technology and knowledge to be extracted.

Furthermore, Article 20 of the 1992 Constitution again empowers the government of the day to mandatorily acquire any piece of land or water body deemed to be required in the public interest provided fair and adequate compensation is paid and individuals with vested interests

in the expropriated land or water body have access to a High Court for determination of interest and compensation payable (KITE, 2010:14). On the contrary, the drilling is offshore though it will curtail the fishing opportunities of local fishermen. Four agents that will be interacting on the use of the sea can be identified here; the government, oil companies, local residents and civil society organizations. Each of these has a choice to make in order to derive maximum benefit from the oil resource. Neither the government of Ghana acting through its state-owned company (GNPC) nor the local residents have the capacity and ability to mine the oil for their benefits. Instead, the rational choice is to grant foreign oil companies the right to explore and drill under specific agreements that will benefit all the agents. However, in such agreements the local residents' interests are often relegated to the background.

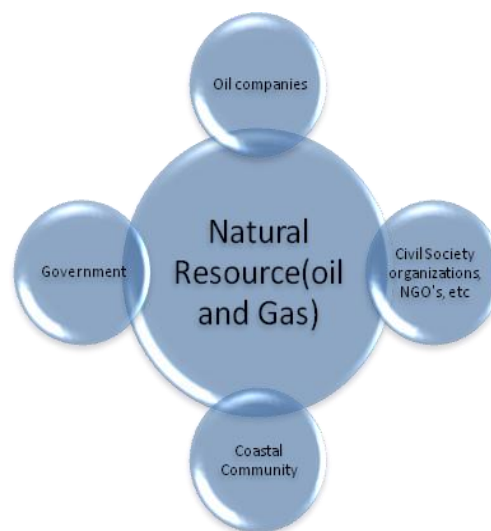


Figure 4 - Agents to interact on use of the sea and discussion on benefits from oil and gas.

For the government of Ghana, its main concern is to improve the economy for all Ghanaian to have a better standard of living. The livelihoods of the people of Cape Three Points, Ntakrom and Sanko Junction could be handled by the Ahanta West District Assembly since the development of the area falls directly under the jurisdiction of the Assembly. However, what may be missing is whether the government has set aside a special fund to deal with any negative effects the local residents may suffer from should there be any unexpected occurrences. One interesting case is the discussion of whether the fishermen had a property right to the use of the sea and can therefore defend their property rights.

A property right is a social construction and may be conferred to an individual or groups of individuals by norms or laws. According to Vatn (2005:254) a property is not a thing as is

often thought of but “it is a relationship between the rights holder and the rights regards under a specific authority structure like the state granting legitimacy and security to a specific resource or benefit stream... and have to be defined and defended through socio-political processes”. In an event of exclusion and no payment of commensurate compensation, the local residents may decide to use physical force to register their dissatisfaction but this does not necessarily mean they have a property right to the use of the sea. The fact that they have lived and done fishing off the coast of Cape Three Points is not enough to warrant ownership rights of the sea.

However the patterns of interactions should reflect choices each of the agents have to make in order to reduce transaction cost. Though the banning of the sea is the main institution that controls the chances of survival of the local people, pollution through irresponsible behaviour cannot be ruled out. Vatn (2005) again contends that a resource regime under the open access “is a situation where there is no property” (p. 256). Even if the use of the sea is deemed “open”, in which case no one can lay claim to its use, access should still be regulated since rights cannot be granted without corresponding responsibilities.

2.2 LIVELIHOODS AND THE RURAL POOR

Governments of nations are often given the mandate to administer and manage the resources of the nations with the view that the lives of the citizens will be improved. The livelihood of the rural poor therefore becomes very paramount to the decision-makers of the time. The fulfilment of this is not about making food available on the table but providing facilities that support the fundamental needs such as portable water, social amenities and jobs for the people. In simple terms, the word livelihood implies a means to a living. For this means to be authentic, it must be seen to be sustainable and having a dove-tailing effect on other means of living. The term livelihood has been defined in different ways by different authors. According to Chambers and Conway (1992:7)

A livelihood comprises of the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term.

Out of the components of a livelihood, the most complex is the portfolio of assets out of

which people construct their living, and this comprises tangible assets and resources, and intangible assets such as claims and access (Krantz, 2001). A definition of livelihood must therefore reflect the element of sustainability and possess the ability to withstand and recover from stress and shock.

Scoones puts forward his definition of livelihood by modifying what Chambers and Conway have proposed. For Scoones (1998:5)

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base.

This definition does not include the dove-tailing effect of one means of livelihood to another. In view of this, the linkage between diversified alternatives to be able to cope with and recover from stress is not mentioned. The definition of a livelihood in this study takes all the discussions raised into consideration but since it deals more with institutions and management of natural resources the definition of Ellis is more appropriate. According to Ellis (2000: 10)

A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household.

This definition shows how agents in a management situation interact and make choices but fails to convey the element of change over time and adaptation to evolving circumstances (Ellis, 2000). In reality, rural folks use various survival strategies through diversification to earn a living. Even though many of the rural folks may be engaged in one major occupation, the income from this source may be used to acquire other means of generating income such as building a house for renting out or buying a vehicle for transport services.

To put it in a more befitting context, Ellis (2000:15) defined the concept of rural diversification as “the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and to improve their standard of living”. This also implies that diverse social relations play an important role when institutions are introduced to control the behaviour of actors. One very important consideration here is to determine the degree of access individuals or families have to whatever resources that will be made available to be used for income generation. Ellis (2000) defines and explains access in

the face of social relations. According to him, access constitutes

The rules and social norms that determine the differential ability of people in rural areas to own, control, otherwise 'claim', or make use of resources such as land and common property (eg. Scoones, 1998:8). It is also defined by the impact of social relations for example gender or class, on this ability.

Access can also be extended to cover not just the right but the ability to take part in and derive maximum benefits from social and public goods and services. Any alternative means of livelihood that grants a high degree of access to local residents who may be negatively affected will be held in high esteem.

Available statistics indicates that for the whole of the Ahanta West District, 59.4% of a total work force of 22,941 are engaged in the agricultural, animal husbandry, fishermen and hunters sector of listed occupations while that of men represents 51.4% of a population of 20,793(Ghana 2000 Population and Housing Census: 46). Even as a District, this sector looks more promising to channel resources for creating livelihood opportunities into since majority of the work force are engaged here.

2.3 TYPES OF CAPITAL

In the definition put forward by Ellis (2000:8), five types of capital can be identified namely natural capital, physical capital, human capital, social capital and financial capital. By summarizing, “natural capital refers to the natural resource base (land, water, trees) that yields products utilized by human populations for their survival. Physical capital refers to assets brought into existence by economic production processes, for example, tools, machines, and land improvements like terraces or irrigation canals. Human capital refers to the education level and health status of individuals and populations while financial capital refers to stocks of cash that can be accessed in order to purchase either production or consumption goods, and access to credit might be included in this category. Social capital refers to the social networks and associations in which people participate, and from which they can derive support that contributes to their livelihoods”.

In order for the residents of Cape Three Points and its surrounding communities to be empowered, all these forms of capital should be accessible to them. Out of the five types of capital mentioned above, the most important in this study is human and financial capital. Human capital may be used to determine human development which is usually calculated at

the national level. However, the input basis is derived from individuals. Fosu and Mwabu (2010:1) define human development as “a sustainable process that expands and strengthens people’s capabilities, such as abilities to read, and write, avoid premature death, to appear in public without shame, and to enjoy a decent standard of living”. Cumulatively, this will lead to a sustained economic development. Human development would ultimately create conditions that would limit over dependence on one source of livelihood in addition to empowerment for adaptation.

2.4 ENVIRONMENTAL IMPACT ASSESSMENT OF DRILING SITE

Environmental Impact Assessment (EIA) can be defined or explained as the scientific assessment of the positive and or the negative impact a proposed project may or is likely to have on the environment and as well as the people living within the catchment area of a project. This is often done to identify the future consequences an ongoing project or one yet to be implemented will create. The impact will be measured as the difference between what will happen with or without the project. In natural resource extraction, the most important factor to be considered to determine the viability or otherwise of it is the benefits that would accrue from it.

Such benefits, even though may not be easily determined in specific cases, there are known projects which have become the backbones of many economies. Nigeria for example derives the largest share of her national revenues from oil exports. The necessity of an Environmental Impact Assessment may not necessarily be used to determine where a project such as commercial oil and gas extraction should be carried out but to shape policy direction and to specify specific actions a government needs to embark on. It will also inform the government, civil society organizations and opinion leaders on the opportunities that will be created in order to take advantage of.

In the case of oil exploration and production in Ghana, it is likely to induce socioeconomic, environmental and cultural changes on the people of Cape Three Points and its surrounding communities in particular and the other coastal towns in general. The oil and gas industry is considered to be presenting opportunities and threats to local residents living close to production sites. The opportunities may include employment, business avenues, training as well as new or improved access to infrastructure and social amenities in general. The threats on the other hand can be felt in cultural changes, increased population, moderation to existing

infrastructure, increased cost of living, changes in local economic activities like fishing and farming and the biophysical environment as a whole (KITE, 2010). Though the general perception has been that the revenue of the oil and gas will boost the Ghanaian economy, the Environmental Impact Assessment (EIA) is mandatory to inform policy directions. Most often than not, the threats far outweigh the opportunities at least in the short run.

Change in its simplest sense means the process of becoming different. It may be spontaneous or gradual. In whatever form it takes, it comes with a cost. Culture is never acquired within a short period of time. This makes cultural changes especially one related to occupational change rather difficult. This is what the people of Cape Three Points, Ntakrom and Sanko Junction are being made to undergo. Perhaps, of equal importance when natural resources are discovered is the attraction of populations towards the region. As a project that holds large amounts of revenue, the masses will be drawn close to the production site with a view of capturing and making profits from available economic opportunities. This large numbers is likely to skyrocket the prices of goods and services to the disadvantage of the local residents.

A key consideration of this kind of project deals with what happens to the biophysical environment as a whole. There is evidence to substantiate the claim that oil and gas extraction comes with a huge environmental cost. This may be immediate or a future occurrence. Shell hydro's activity in the Niger delta often comes to mind. As a future occurrence, BP's oil spill in the Gulf of Mexico can be sighted. With this assumptions in mind, Tullow Ghana Limited has conducted its EIA on the Jubilee field in a bit to "predict, describe and assess the impacts that may result from the project activities and identify mitigation measures and management actions to avoid, reduce, remedy and compensate for significant effects, and where practicable, to maximize potential impacts and opportunities" (KITE: 25) and came out with the following conclusions as depicted in Table 4.

Table 4 - TULLOW GHANA'S ENVIRONMENTAL IMPACT ASSESSMENT OF THE JUBILEE FIELD

ISSUES	RESOURCES AND RECEPTORS	RESIDUAL IMPACT
Project Footprint(physical presence, noise and light)	Seabed habitats and species	Minor
	Marine mammals and turtles	Minor
	Fish, marine invertebrates, birds, manatees	Not significant
Operational discharges (routine, drill fluid and	Water quality	Minor
	Seabed habitats	Minor

cuttings and non-routine)	Marine organisms	Minor
Emissions (of	Local air quality	Minor
Atmospheric pollutants and Greenhouse gases)	Greenhouse Gases (Regional)	Minor
Waste Management (storage, transport and disposal)	Water quality, soil quality and human health from storage	Minor
	Water quality, soil quality and human health from poor disposal facilities	Moderate
Impacts from Oil spills	Water quality from small diesel spills from bunkering	Minor
	Water quality, coastal resources and economic activities from medium and large crude oil spill	Moderate
Socioeconomic and	Revenue to the Government of Ghana	Moderate Positive
Human Impacts (Macroeconomics, employment, training, procurement of goods and services, interference with other activities)	Employees and local businesses	Minor positive
	Draw down of resources and interference of onshore economic activities	Not significant
	Fishing activities	Minor
	Commercial shipping and vessel passage	Not significant
	Disturbance effects on communities and use of public utilities	Not significant
Cumulative Impacts	Water quality, air quality, habitats, species and human receptors	Not significant
	Water quality, air quality, habitats, species and human receptors	Not significant
Transboundary Impacts		

Source: Tullow Ghana Limited, 2009

From the conclusions above, it can be argued that the effect the oil production will have on the coastal residents in general is minimal and therefore makes the extraction justifiable. Again, the conclusion suggests that the overall impacts are not significant. This is contrary to the generally held view that the oil production will negatively affect the general coastal communities. One major potential negative effect stakeholders have expressed concern on is the likelihood that the oil activities will curtail fishing which is a major source of livelihood for not only the people of Cape Three Points and its surrounding communities, but also other communities. In the EIA report, the effect on fishing was assessed as “minor”. Meanwhile, it did not take into account that the restricted area will become a safe haven for the fish to breed

and avoid being caught even by bigger trawlers. Acting on hindsight, the EIA report identifies three possible adverse effects to fishing. This according to KITE (2010:27) include

- Loss of access to area of the Floating Production Storage and Offloading (FPSO) during completions, installations and operations due to the presence of vessels, FPSO and the safety exclusion zones;
- Attraction of fish to the FPSO; due to the FPSO being stationary and acting as a fish aggregating device (FAD); and
- Disturbance to fishing activities and damage to fishing gear from project support vessels and supply vessels transiting to and from Takoradi.

In view of this, Tullow has proposed for the establishment of a safety exclusion zone which will be legally enforced to reduce the risk of collision at sea. Tullow further argues that the exclusion zone it has called for would be relatively small and can therefore not affect catches as it is being tooted. No matter how sound this argument may be, the perception that it will have a direct link to the volume of catches cannot be ruled out.

2.5 NATURAL RESOURCE MANAGEMENT

Natural resources are those resources that occur naturally. They have not come into being by the making of man through any artificial means. There are many natural resources that have huge economic potentials even when they have not been extracted. Examples of these include precious minerals like gold, diamond, copper and silver. Others are water resources, wildlife and crude. Most of these are non renewable but their contribution to an economy in terms of the revenue derived from them are relatively very huge.

Due to this, the management of the revenue derived from a natural resource is of utmost concern to the citizenry of a country. Mismanagement is often said to be a self-inflicting curse a country has brought to itself. There are numerous studies of natural resource and economic development in which some have supported the view that resource-poor countries often have a better economic growth than resource-rich countries with the citizens of the resource-poor countries having a better quality of life. Available literature again suggests that resource abundance has a detrimental effect on the development and quality of domestic institutions. These arguments have been supported with empirical evidence.

Ghana has been extracting and exporting gold, diamond and silver since it become independent. Even with world market prices of these minerals reaching a record high, the revenue has not been able to transform the economy into a middle income economy yet. With

the recent discovery of commercial quantities of oil and gas, expectations among Ghanaians have reached a very high level. The assumption is that once the operations begin, the economic hardship and joblessness people are going through will become a thing of the past. However, available literature indicates a non-linear relationship between a natural resource abundance and economic growth.

This study concentrates on how the livelihood opportunities of people living close to the production site would be affected but it is of equal importance to discuss how the oil revenue will affect the national economy. It is out of this Government would be able to make improved concessions for the people around Cape Three points.

2.6 OIL AND GAS RESOURCES

In line with popular perceptions, the discovery of oil and gas brings with it a dream of wealth and a sustaining prosperity. Expectations and euphoria associated with the announcement of the discovery of oil usually are high. However, oil wealth has done little to lift the world's poor out of the doldrums of poverty. Rather, it becomes a source of conflict, a means by which greedy elites enrich themselves through corrupt practices and an avenue for economic mismanagement. Over dependence of oil resources sometimes crowds out other economic activities often referred to as the "Dutch Disease".

Just like other natural resources, the oil industry has certain characteristics that make it unique. In the first place, it has an inelastic demand for labour for even though it has a consequential effect on the creation of jobs in other sectors. In itself, it does not necessarily require linkages with the industrial sector. It is non-renewable and can therefore run out of reserves. The world market price of oil is highly volatile with accompanying boom-bust cycles though it has a great tendency to generate profits for states and private actors (Karl, 2004).

Macartan et al (2007:8) contend that the volatile nature of oil revenues usually affect the long term development planning of a country. Fluctuations in the world market price of oil poses a significant setback to future financing of an economy which includes fiscal management and budgetary planning most especially if an economy over relies on oil revenues. The benefits derived in the good are often temporal but has a tendency to create a long-term problem. Most developing countries borrow money from international financial institutions to finance development projects or even as a supplement to their budgets. In anticipation for a windfall,

oil producing countries turn to borrow more but when prices fall the conditions for borrowing do not change. The burden of repayment to the lending institutions forces these fragile economies to cut down on public sector expenditure. Nigeria, Mexico and Venezuela went through similar situations in the early 1970s and by the 1980s when repayment was due their economies began to develop cracks.

Another phenomenon associated with a natural resource extraction is its ability to exist independently of the rest of the economy especially when it is exported in its raw state to be processed abroad. By this the revenue may only be used in solving the balance of trade problems a country may have. In this way the direct benefit for the populations may not be felt (Renner, 2002). Countries which have solely concentrated on the extraction of natural resources and exporting them for processing elsewhere have suffered this fate.

In comparing the economies of Ghana and Switzerland for example on the basis of natural resource endowment, a conclusion can be drawn that Ghana is more resourced than Switzerland but Switzerland's economy is several times stronger than the Ghanaian economy. For many developing countries, this is not a new phenomenon. The only difference is the magnitude and the frequency of occurrence. Dating back to the 17th century through to the 21st century, there are specific examples of countries whose economies did better than others even with the inflow or domestic production of natural resources. Comparisons can be made between The Netherlands and Spain in the 17th century, Switzerland and Russia in the 19th and 20th centuries, and Japan and the Asian Tigers as against Nigerian, Mexico and Venezuela in the 21st century (Sachs & Warner, 1997).

Furthermore, any expectations nursed can turn to nothing but a mirage, when an economy is oil-driven. This is what happened to oil exporting countries in the early 1960s when large sums of income were ripped but suffered economic shocks when the world market prices fell sharply in the early 1970s. In fact, in economic history, this period was one of the most remarkable international resource transfers due to its immensity, suddenness and the fact that it was not expected internationally. With the inflow of several millions of dollars, the economies of the oil exporting countries boomed. The governments began to implement projects that had long gestation periods, increased salaries of workers and embarked on other projects which were not of immediate economic value thereby losing control of the national expenditure. In addition, oil money was used as collateral for borrowing large sums of money from international financial institutions. With the fall in oil prices, it was realised that state

expenditure far outweighed income thereby causing economic stagnation. In consequence, these countries suffered high inflation, huge external debts and the “Dutch disease” ⁶(Sachs & Warner, 1997).

However, Alexeev & Conrad (2005) have shown that the claims that have been made in several research studies on the effect of large endowment of oil and other mineral resources on long term economic growth of those countries are not negative but it depends on the indicators used. To them natural resources per se is not a source of a curse. Alexeev & Conrad (2005: 4-5) argue strongly that

“The direct determination of the impact of mineral resources on the rates of growth is hindered by the relative shortness of the time period for which more or less reliable data are available. Usually, growth rates are measured as an average rate for a 25-30 year period starting in the 1965 or in 1970 period. While it is plausible that the oil and other resource producers had had slower growth rates during this period, the main issue is presumably the effect of mineral resource endowment on the economic growth over the entire period of commercial use of the resource”.

The discussion above clearly shows that using the volume of income from a natural resource to determine the economic performance of (growth of the economy) a country may not be sound. The oil producing countries which suffered economic hardships during the 1970s are still producing and exporting. Though they have not been able to make rapid recovery, there is significant evidence to show their economies are getting better. Alexeev & Conrad (2005) therefore concluded that when a country has a higher per capita Gross Domestic Product (GDP) than another, then the country with the higher per capita must have experienced a faster growth than the other country.

Another phenomenon which is said to be contributing to the natural resource curse is corruption. Available statistics indicates a perversion of the act of corruption when a natural resource experiences a boom. “Corruption takes place not only at the production and exports stage through secret signature bonuses and opaque financial arrangement, but also as a result of extremely high-level and difficult-to-absorb investments at the “upstream” stage as well as

⁶Dutch disease is an economic concept that explains the relationship between an increase in the exploitation in natural resources and a decline in the manufacturing sector.

at the trading, or “downstream”, stage, where massive resources turn to disappear through price transfers that are difficult to track”(Karl, TL 2004:667).

For corruption to thrive successfully, a state’s institutions ought to be weak. Norway, one of the world’s leading exporters of oil had very strong institutions in place when it began oil producing. Østerud (2007) points out clearly that it was through sound institutional strategies and strong policies that Norway was able to establish a good control over the petroleum fiscal policy. Norway was able to negotiate favourable terms with the international oil companies that were exploring for oil. The Norwegian government had direct involvement in the exploration and production of the oil rather than selling or auctioning its production rights.

Long before the discovery of crude oil, Norway had an egalitarian system running which made it possible for state authorities to display transparency and live ordinary lifestyles and this is seen to have permeated the creation of the oil fund where only a small percentage of the profit from the fund is used in the fiscal budget. The welfare of everyone is a responsibility of the state. It is therefore not surprising that Norway has been ranked as the best country in terms of its human development and quality of life in eight years out of the last ten years (The Swedish Wire, 2010). This goes to proof that development is closely linked to strong institutions and transparent management of state resources. Though other sectors contributed to the success Norway has achieved, it can be argued that it is largely due to the revenue the oil production has brought into the country’s economy.

2.6 NATURAL RESOURCE MANAGEMENT IN GHANA

Ghana is noted for the extraction of many minerals including gold, bauxite, aluminium, salt and silver, just to mention a few. In 2002 for instance, Ghana was ranked as the second largest producer of gold in Africa. In 2000, the total export of minerals accounted for \$984 million or 51% of total exports with gold alone generating \$702 million (World bank, 2009). Eugene Sam-Okyere (2010) also reports that mining accounts for 43% of Ghana’s gross export revenue. In 2008, Sam-Okyere (2010) quotes the mineral revenue to have risen by a 28% from \$1,711,511,384 in 2007 to \$2,303,928,866. On the domestic front, the mining sector alone contributes about 12% of Ghana’s total corporate tax earnings, 34.3% of total exports and 11-12% of exports. In 2011 alone, the World Bank and International Monetary Fund (IMF) have estimated the expected revenue from the oil activities to be 900 and 752 million

dollars respectively. A careful look at the performance of the mineral and other sectors and the expected windfall the petroleum sector is to generate over the next decade seems to provide the answer to Ghana's economic problems.

Ghana is considered to be one of the few African countries that can achieve the middle income status and half poverty by the year 2015. Poverty levels have fallen significantly from 52% in 1990 to 28.5 % by the end of 2009 (World Bank, 2009). This notwithstanding there are still many who live on less than \$2 per day.

2.8 GHANA'S SPECIFIC CASE

After the discovery of oil and gas, many are those who are of the view that Ghana may or may not be affected by the natural resource curse problem. To be able to escape from this situation depends on a number of factors. These may include the state of the economy at the moment, availability of jobs, the performance of other sectors of the economy, the legal frameworks within which the oil production will operate, presence and prevailing institutions and the commitment of oil companies to honour their obligations.

The 2011 Financial Year Budget (2010: 4) proposal captures some keys indicators of the state of the economy as follows:

- Gross Domestic Product (GDP) growth rate of 4.1 percent in 2009 compared to the sub-Saharan African growth rate of 2.0 percent;
- The fiscal deficit reduced significantly from 14.5 percent of GDP on cash basis at the end of 2008 to 9.7 percent of GDP in 2009;
- Inflation has trended downwards in sixteen (16) consecutive months from 20.74 percent at the end of June 2009 to reach 9.38 percent in October 2010, the lowest in the last two decades;
- Gross international reserves of US\$ 3,973.0 million at the end of October 2010 has exceeded three months of import cover compared with reserves of US\$ 2,036.2 million at end of December 2008 which could barely cover 2 months of import; and
- The Cedi has strengthened and appreciated by 0.1 percent, 2.2 percent and 5.4 percent against the US dollar, the pound sterling and the euro respectively.

If this is anything to go by, it can be argued that the overall economy is on a sound footing. With the income from the petroleum revenue, the economy is expected to grow faster than the 2010 outlook. Ghana is considered as one of the few countries with a good investment climate. With its accelerated policy of divestiture, capital account liberalization, tax incentives and domestic financial reforms, significant in-flow of foreign investment were recorded (World Bank, 2008). Foreign Direct Investment (FDI) into the West African Sub-region increased from US\$1.9 billion in 1995 to about US\$15.8 in 2006. On the domestic front, Ghana's share of the FDI quadrupled from about US\$ 159 million in 2005 to US\$636 million in 2006 (Adam & Tweneboah, 2009).

Realising the need for job creation and increasing revenue from taxation, the government of Ghana has made it its prime target to implement policies on youth employment. The fiscal budget proposal captures the contributions of other sectors of the economic growth from 2010 as: agriculture 4.8 percent, industry 6.0 percent and service 8.2 percent. Having learnt from the experience of Nigeria and Norway, the government is putting in measures to avoid the Dutch disease by addressing specific interventions and strategies to revamp the non-oil sector of the economy.

Ghana is steadily establishing herself as a beacon of democracy not only for the countries within the West African Sub-region but the whole of Africa and beyond. Since 1992, Ghana has maintained a fairly stable political atmosphere. The rights and freedoms of individuals are respected as stipulated in the constitution. With a vibrant legal system, state institutions have become more empowered. The legislative arm of government relies on its experience to expedite action on legislative processes to make available the legal framework for the operations of multinational companies. Ghana has become a member of the Extractive Industry Transparency Initiative (EITI) in a bid to ensure transparency in the payments made to government. Bills have been tabled in parliament to include activities of the oil industry.

However, economic growth rates do not necessarily mean the per capita income and therefore mutually exclusive. Ghana has a free market economy largely determined by the prices of international commodity market. Even with a stable economic growth majority still live below the world poverty threshold of US\$1.25 (Ravallion et al. (2009). The right to information bill has not been passed to make it mandatory for public officials to make information available to ordinary citizens even though Ghana is a signatory to the EITI. Public sensitization has whipped up interest on the oil industry. It is expected that the collaboration between all stake

holders will help bring a better quality of life to all Ghanaians and especially those who will negatively affected by the oil production.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

Every research work adopts a methodology that gives it credibility. In doing so, data is gathered from different sources and analysed with various tools which are often recognised and approved within the academic circles. Generally, there are two main research strategies; qualitative and quantitative research strategies. This chapter deals with the research strategy, research design and research method used in gathering data.

3.1 RESEARCH STRATEGY

Bryman (2004:19) simply explains research strategy as “a general orientation to the conduct of social research”. The explicit use of one research strategy over the other stems from the issues being researched on. The study of the social world behaviour is favoured to be described more than being quantified while the physical world employs measurements. This does not mean the social world cannot be analysed using quantitative tools. In quantitative research, emphasis is placed more on the testing of theories. On the other hand, and by contrast, qualitative research embodies the use of more words than quantitative measurements. Emphasis is placed on the generation of theories. This study has employed the qualitative strategy in the collection and analysis of data.

3.2 RESEARCH DESIGN

Research design according to Bryman (2004:27) is to “provide a framework for the collection and analysis of data”. This study makes use of case study design since the three communities under investigation are close to each other, have a common language and occupational orientation and would be affected by the production activities. The case study is used in order to have an in-depth understanding of the outcomes of the interaction between the agents involved in the oil and gas management as well as making decisions on the welfare of the local communities.

3.3 RESEARCH METHOD

Research entails the collection of information on a phenomenon using different techniques. By so doing, one technique or a combination of different techniques are used. Silverman (2000:88) states that methodology is the “general approach to a research topic”. This statement implies that every research work has to follow a kind of procedure based on a chosen technique. This could be in the form of interviews, completion of questionnaires or participant observation in which case the researcher takes part in an event being studied while taking records. This research work made use of such techniques as questionnaire administration and unstructured interviews, seminar attendance and documentary analysis. Since many of the results of the interactions between the agents are based on perceptions at this stage, available documents based on similar situations have been extensively discussed. The methods of data collection therefore were based on

- Field Note taking
- Observations
- Interviews in the form of questionnaire administration
- Participation in seminars and
- Documentary analysis

Wherever I went in connection with the study, I carried a field notebook where I recorded events. The goal of using the field notebook was to keep a complete record which provides accurate and very useful information about events in the field. In performing a social science research which involves human behaviour, I had to make use of personal observations on the issues under investigation in order to give a fair but accurate report. Since the results of the interactions between the agents are still based on perceptions, different questionnaires were administered to the agents involved to elicit information from them. In addition to the above, I attended some seminars organised for the local residents and a forum organised for contributions from the civil society and general public to make inputs on the how the oil and gas is to be managed and the required laws to be enacted and enforced. Finally, publications on the oil find were extensively analysed in order to get a good understanding of the expectations of Ghanaians on the oil find.

3.4 QUALITATIVE METHODOLOGY

Research may be seen as the vehicle for acquiring knowledge by looking at a new phenomenon while combining what is known and the unknown in a bid to produce new knowledge. One important decision which I had to make before conducting the field study was to choose between qualitative and quantitative research approaches as the means of collecting data. Before making this choice, it became necessary I had to acquire basic knowledge of these two methodological approaches in order to differentiate between them. The search for not just knowledge but that which is relevant in today's context especially in educational research has been characterized by two different views of social science research namely: positivism and interpretivism. Qualitative methodological argument is based on the interpretivism tradition which mainly applies to the social sciences.

Bryman (2004:11) contends that positivism is “an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond”. It can be argued here that the positivistic paradigm is characterized by numerical and measurable quantities and objectives, universal definitions, often much associated with the physical sciences. The assumption here is that the social world can be studied in the same way as the natural world in terms of quantification and generalization.

Contrary to positivism, interpretivism argues along the qualitative paradigm which is characterized by subjectivity, particularity and reflexivity. This is in sharp contrast to the positivist view which is often criticized for not recognizing the difference between natural objects and human-beings, people and their institutions (Bryman, 2004). As discussed earlier, this study is situated within the qualitative paradigm and hence requires an understanding of how the introduction of an institution regulates the behaviour of social actors. This implies that I am looking at a particular case in order to gain an in-depth insight into the case. The insight that is gained here can be applied to instances with similar conditions. The qualitative methodology therefore, focuses on the meanings of social interactions and processes, underlying in various ways that reality is created and given meaning.

It is therefore argued that human beings cannot be studied as natural objects since they interpret situations differently and give meanings as required (Silverman, 2006). The interpretation of the text that is elicited from this research was in the form of interviews that

were conducted on fisher folks, representatives of District Assembly and oil companies and civil society organizations. In this respect, responses from the interviews can serve as a huge source of knowledge. Despite the fact that Silverman (2001:1) affirmed the proposition that human perceptions are better studied using the qualitative research approach, there are situations where it becomes exceedingly complex to decide on the use of either the qualitative or quantitative research approach especially when investigating a social issue.

However, a decision to choose one methodology can be influenced by a consideration of how to handle the complexity involved in finding answers to the research questions guiding the study as well as the resources at the researcher's disposal. A clear knowledge of what my research wants to uncover has guided me to choose the right approach to use. Hence, it is my belief that the answers I am seeking were obtained from interviews, observations, seminar attendances and documentary analysis.

3.4.1 LIMITATIONS OF QUALITATIVE RESEARCH APPROACH

Qualitative research has been identified as the most suitable means of conducting a study which addresses any phenomenon dealing with human perspectives or perceptions. Nevertheless, this methodology has been criticized for its weaknesses. Bryman (2004) contends that qualitative findings rely too much on the researcher's often unsystematic views about what is significant and important and often the researcher's biases could influence the research findings. This is found in the use of open-ended questions that are used in interview questionnaires as well as the provision of leading questions to respondents.

Furthermore, an individual may not be able to embrace all knowledge more than a larger society. This may imply that when knowledge is acquired through the qualitative approach using a few respondents, may not be unsuitable for generalization and verification. Qualitative research strategy lacks a high degree of transparency. It is often difficult to tell what the researcher actually did to arrive at a conclusion. This lack of transparency is sometimes seen in how respondents are chosen. Interviewees sometimes choose to provide false information consciously thereby causing a great danger in the justification of the knowledge so acquired.

Furthermore, it is often suggested that the scope of qualitative research is restricted to single cases. This makes it difficult to generalize the findings let alone thinking of replicating the findings in other similar situations. Thus, justification for knowledge gained through

qualitative research is questionable taking into consideration the fact that interviews and observations derived from qualitative research are normally uncontrolled and informal. Even though these criticisms are factual, there is no doubt that qualitative research has been recognized as an authentic means of generating scientific knowledge that does not require statistical presentations and explanations. Research relies on the number of respondents being used in order to be able to generalize the findings.

3.5 POPULATION AND SAMPLING PROCEDURE

This research used a sample of the population of the study area from which data collection techniques were applied. The term population, as is applied here, implies the total number of people (for example a community) out of which a sample is used to represent the total population. Different sampling procedures may be used to arrive at a number that will reflect a true and unbiased representation of the total population.

This study made use of the purposive random sampling method. Patton (1990) stated that it is important to select “information-rich cases for study in depth. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposive sampling” (p. 169). In reference to this view, I selected 25 available household heads from the three communities to interview since they are the breadwinners as well as the fishermen of the families in the communities.

This choice was favoured because of the nature of settlements in the three communities and the presence of the people to be interviewed. For the number of days I stayed in the communities most of the targeted people were said to have been on the sea fishing. Available statistics, at the district could not specify the population of the three communities except for the whole district which was given as 95,140 (Ghana Statistical Service 2000:14). Though the sample was randomly made, it ensured the same number was used in Ntakrom and Akwadae while Cape Three Points had a little more depending on its size as the biggest community. However, others like representatives of the District Assembly, Oil company representatives, opinion leaders/ NGOs/Civil Society Organizations were contacted directly for interviews.

3.6 RELIABILITY AND VALIDITY

Reliability is concerned with the question of whether the results of a study are repeatable or not (Bryman, 2004:28). The questionnaire items used in this study were constructed taking some parameters into consideration to make the results consistent. The instruments were first

tested to find out how suitable the instruments are. The instruments were then adjusted to make sure they would fulfil the reliability requirement.

Validity on the other hand generally deals with whether an instrument measures exactly what it is meant to measure. The questionnaire items were tailored to the testing of the outcomes of the interaction of agents involved in a natural resource management when an institution is introduced to regulate the behaviour of the agents. Specific attention was given to internal and ecological validity. For the internal validity the instruments sought to ascertain whether a relationship between the ban on the use of the sea by fishermen and a dwindling income could be established. Furthermore, ecological validity as a criterion is “concerned with the question of whether social scientific findings are applicable to people’s everyday, natural social settings” (Bryman, 2004:29). This was found out for example by comparing the income levels of the fishermen before the introduction of the ban on fishing in the drilling area and after. Even the frequency of going for fishing and the desire to look for other means of livelihood is a clear manifestation of the validity of the instruments used.

3.7 ETHICAL CONSIDERATIONS

At the beginning of each interview, I sought consent and approval from the fishermen, the District Assembly and the oil companies before the interviews were conducted since they deal with an important issue all Ghanaians share interest in. This was done by giving interview guides to the respondents ahead of schedule interviews. To clear any misconceptions about the intentions of the study, an explicit overview of what the research entailed and how the results would be utilized, was given to the respondents. I also promised to offer privacy and confidentiality to the informants to gain confidence from them and adhere to the principle of anonymity. Data gathered through in-depth interviews require that the researcher should protect against interviewer misperceptions and avoid informants who are out of the ordinary, or who lack credibility.

Any information elicited from a questionable source may not be considered authentic. In order to ensure that data are consistent with the researcher’s conclusions, constant checking with informants during and after an interview was done through telephone calls. In addressing further inconsistencies, lines of communication were left open between the researcher and the informants throughout the study. Even though there are no perfect measures and principles, I tried to keep all minor transgressions in check to make the research findings authentic.

3.8 PROBLEMS ENCOUNTERED

In the conduct of a research, several problems and challenges are encountered. During the course of this study, a lot of challenges were encountered. During data collection, I had to travel several times to be able to elicit the information I needed from my respondents. At the study area there were no reliable means of transport which made it difficult to travel. At some points, I had to walk for several kilometres in rain. At a point, the only means of transport I could rely on was a bicycle I had to buy for the use of my research guide and myself. Sadly, the stress made me fall sick.

Some fisher folks were reluctant to offer information for fear of being victimized. However, incessant probing and continuous solicitation for co-operation helped to achieve success. One other challenge was the accessibility of relevant documents. Some of the oil companies were not willing to make some documents available even after cancelling several interview appointments. On the whole, the field work achieved a relative success.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF THE FINDINGS

4.0 INTRODUCTION

The previous chapter discussed the methodology for data gathering. This chapter discusses the presentation and analysis of the data. The analysis took into account the probable outcomes of the perceptions expressed by interviewees using tabular representations in explaining.

4.1 OIL COMPANY ACTIVITIES

A number of oil companies are involved in the Jubilee Field oil production but one was selected based on the percentage shares it has in the oil field. The company states it has its own responsibility package it would implement to help not only the local communities under discussion but also others who may be affected by their operations. Programmes to be considered include provision of portable water, school buildings, micro credit facilities and development of recreational parks. According to the company, the corporate responsibility holds a positive prospect. It also stated it has a positive working relationship with the local people.

However, concerns raised by stakeholders on the relationship between companies and local people show a different thing. According to Blowfield (2005:173) CSR is failing at a time it is demanded to be taken serious. This does not mean companies are mandated by law to draft a CSR and get it implemented. It is rather an avenue for companies to build a good relationship with the people living close to their operations sites. The relationship between business and society in general has not been cordial over the years though most companies seem to be talking about how responsible they are to the needs of society. By law, every company in the extractive industry is mandated to do an impact assessment of its operations. In response to this questionnaire item, the company contended the impact assessment it did needs improvement since over time, some indicators that were used may change.

By alluding to this, the company has supported an assumption that the implementation of CSR is undefined. The lack of a clear definition makes it difficult to access the truth or otherwise of what companies seem to be professing and the likelihood of failing to deliver on their promises becomes high. In this light, the warm reception the local communities have

extended to the companies would only be short-lived. In response to a number of issues concerning the environment, Tullow Oil Ghana Limited published what it considers big issues to deal with:

- ***Discharges***

Routine discharges {such as waste water from the FPSO} and drilling wastes will be treated to accepted standards prior to discharge. Non-routine discharges {such as chemically treated hydrotest water} will be collected in a closed system and treated to meet Ghanaian and international standards. The selections of fluids will take into account the potential environmental impacts.

- ***Air and water Quality***

Impacts from emissions to air are unlikely to have a direct impact on local communities. Our operations will provide GHG emissions but we are working to minimise these through the use of state-of-the-art equipment, application of our EHS policy, EMS and toes. Flaring will be avoided wherever possible with the stated intention to flare only in specified situations. Water discharges from the FPSO and support vessels will all be treated prior to discharge to ensure that they meet both Ghanaian and industry standards.

- ***Waste Management***

The scale and nature of waste produced will vary depending on operations that are being carried out. Some wastes, such as macerated food waste, can be treated and disposed of at sea in accordance with MARPOL, the International Convention for the Prevention of Maritime Pollution from ships. Other non-hazardous waste will be brought ashore for treatment, recycling and disposal. Hazardous waste will be transported ashore for disposal at appropriate facilities.

- ***Oil Spills***

Results of the impact assessment carried out as part of the ESIA process show that risk of an oil spill is very slight. We have however put in place a comprehensive OSCP to ensure that in the event of a spill we are ready to take appropriate action. We have also helped to form the GOELF, which consists of Ghanaian agencies that will be involved in the event of an incident.

- ***Fishing***

We are working closely with the Ghanaian Fisheries Agency and fishing community to alleviate any concerns and issues around the presence of the FPSO. This includes

both direct and indirect assistance ranging from compensation procedures, to assistance with locating alternative fishing grounds. Tullow Ghana is also working to educate the fishermen about potential safety issues caused by fishing close to our operation.

- **Community Support**

The Jubilee ESIA discussions also helped us to understand the most pressing needs of the six coastal communities of the Western Region and to identify the most appropriate Social Enterprise and social investment projects for the area. The drilling of water wells in the region and our support of programme to eradicate river blindness were the first direct outcomes of the process. The information gathered by the ESIA also allowed Tullow Ghana to develop a Social Enterprise strategy and management framework (Tullow Ghana, 2009:35).

The preparation Tullow Ghana Limited has made gives credibility to its capacity to deal with any eventuality occur. The fact that Ghana's Environmental Protection Agency has approved the impact assessment submitted by the oil companies means the standards that meet Ghana's environmental laws would be adhered to. Tullow Ghana Limited has a proven record on health, environment and safety in other parts of the world it operates in and this can be relied on.

4.1.1: Dealing with Environment, Health and Safety

The oil companies in Ghana's oil business have a track record of maintaining a high environmental, health and safety record and are doing everything possible to maintain this standard. In responding to how this would be done the company representative had this to say:

“the records are there to proof our commitment to what we have been saying. I think it is fair to refer to our past operations not only in Ghana but elsewhere in the world to justify whatever claim we make. Our company will make sure the negative impacts of our operations are minimised in order to gain credibility from all our partners”.

In addition to what the company's representative said, there are well established procedures by which environmental problems arising from petroleum operations are dealt with. Various seminars and fora have been organised to clarify the position of the operations of all the companies in order to erase any doubt about their commitment. As a signatory to the

Extractive Industries Transparency Initiative (EITI), Ghana has developed legislation to ensure that corrupt practices are kept at bay.

4.2 NATIONAL INSTITUTIONS AND THE OIL INDUSTRY

Four national institutions were contacted to seek responses on the roles they are expected to play in making sure the oil find will be sustainably managed. These include the Ministry of Lands and Natural Resources, Ministry of Environment, Science and Technology, Ministry of Energy and Environmental Protection Agency. The study sought to identify their level of involvement in formulating and implementing environmental laws.

Three institutions (MLNR, MEST and MOE) responded they are actively involved in environmental regulation while the EPA said it is very actively involved. As sectorial ministries and an agency, they have specific roles they play in the formulation, implementation and monitoring of all activities related to their area of jurisdiction. The three ministries most often coordinate in the planning and implementing of policies.

However, the mere claim of active involvement in environmental law making and implementation may not ultimately reflect in the implementation. The implementation of a policy or law in a country requires power and a political will which cannot be influenced. Transnational corporations which include oil companies sometimes defy national laws and escape prosecution as a result of the power they wield.

They are able to use their influence to lobby for how bills dealing with their operations are formulated. Though Shell Oil Company has been flaring gas in the Niger Delta, the Nigerian government has not been able to bring Shell to order (Friends of the Earth, 2006). Stakeholders in the Ghana oil industry have expressed concerns over a similar situation for government to strengthen its position on the enforcement of laws to curb pollution and destruction of ecosystems.

Furthermore, the study also sought to ascertain the presence and state of Ghana's environmental laws. All four national institutions responded in the affirmative. The presence of environmental law in itself is inadequate. Its state and effectiveness in curbing anthropogenic effects on the environment is equally essential. The current environmental law in Ghana does not adequately address issues on oil extraction since this is the first time commercial activities of oil and gas is being done in Ghana. In view of this government has

now laid a bill in parliament to be passed into law. The absence of this law gives oil companies a breather and an opportunity for irresponsible behaviour.

In addition, the views expressed by the national institutions show that there would be a high degree of effectiveness with regards to the monitoring of environmental laws in Ghana. M.L.N.R, M.E.S.T and M.O.E were of the view that there would be a satisfactory monitoring while E.P.A intimated monitoring will be very satisfactory. These responses give an indication that these institutions have the needed mandate and capacity to prosecute any company that does not comply with the country’s environmental laws. Despite this assurance, the bill on oil exploitation is yet to be passed and any irresponsible behaviour by any of the oil companies at present may not be subjected to retrospective legislation.

4.2.1 COMMUNICATION AND REPRESENTATION

Communication and dissemination of information contribute greatly to social cohesion. On this score, the study sought to find out how the views of the local people are represented on discussions centred on the creation of opportunities for their livelihood and survival. Since the oil operations are seen to be more of a national issue, the representatives of the ministries shared their opinions and this is summarised as below.

Table 5 - Medium of communication

National Institutions	Medium of communication with Local resident on benefits
M.L.N.R	Through assembly members/ chiefs
M.E.S.T	Chiefs/opinion leaders
M.O.E	Through Assembly member
E.P.A	Through assembly members and chiefs

Source: Field work, 2010.

Table 5 explains how communication is expected to flow to the local level stakeholders. The national institutions interviewed stated that the medium through which the communities will be receiving information are through the District Assembly members or the chief/opinion leaders or both. This shows the important role these people play in community development.

4.2.2 EDUCATION ON RIGHTS AND RESPONSIBILITIES ON OIL ACTIVITIES

It is one thing for the views of an actor to be represented and another to be educated on rights and responsibilities. The local folks need to know what rights they can claim and how to claim those rights as well as the responsibilities they have to display. Those their views are

being represented by their leaders that may not be enough. The study sought to find out how they would be educated on this.

Table 6 - Educating Local people on oil activities

National Institutions	Responses
M.L.N.R	Through Local representatives
M.E.S.T	Peer education/local representatives
M.O.E	Seminars by oil companies
E.P.A	Seminars and Peer education

Source: Field work, 2010.

One main factor that would promote a warm relationship between the local residents and oil companies has to do with the level of knowledge and awareness of what the whole project is about. The four institutions interviewed gave responses ranging from a combination of seminars, dissemination of information by local representatives and peer education. The presence of this arrangement gives an indication that there would be a good working environment within the area.

4.3 INSTITUTIONS AT THE LOCAL LEVEL AND COMPANY ACTIVITIES

A number of institutions were identified as partners who will be involved in the activities of the oil production. Table 7 shows the responses given by three of the institutions I interviewed to determine their level of involvement in the oil production.

Table 7 - Involvement of local institutions in CSR implementation

Name of Institution	Involvement CSR implementation	Opportunity for negotiations
An NGO	Unclear role	Not very specific
District Assembly	Yes	Not well defined
A Traditional Authority	Unclear role	Partially involved

Source: Field work, 2010.

All three institutions seem not to have a common role. While the District Assembly representative responds positively to its involvement in the implementation of any CSR activity, the NGO and a traditional authority indicated that their role is unclear. All three

institutions are seen as stakeholders at the local level. On the opportunities for any form of negotiations between stakeholders at the local level and oil companies, all three institutions expressed misgivings. The traditional authority stated a partial opportunity for direct negotiations with companies while the NGO and the District Assembly representative could not specify their roles. This gives an indication that there are no laid down procedures to follow in an event of any form of agitation by local residents. In addition, the responses given above turn to create doubt as to whether the companies are in constant consultations with the local people to be able to assist them in finding alternative sources of livelihood.

4.3.1 Livelihood opportunities to be provided to local residents

The District Assembly, the Non-Governmental organization and the traditional authority interviewed were strongly of the view that the provision of a source of portable water, cash payment as compensation for loss of source of livelihood, provision of school blocks and offering of non-fishing related employment have been on the agenda of both the central government and the oil companies. From the series of meetings and discussions that have been held so far the stakeholders are getting convinced the local people will not be worse off when these projects are executed.

4.4 HOUSEHOLD BASIC STATISTICS

A total of 25 respondents from the three communities were interviewed to elicit information on the impacts of the oil production activities on their lives. The focus was on the men whole are directly involved in fishing as well as heading households. The definition of household used in this context implies a group of people who are blood-related and living under one roof and under the care of a family head.

Table 8 - Number of residents by Communities

Communities	Number of responses	Percentages (%)
Cape Three Points	11	44
Akwadae	7	28
Ntakrom	7	28
Total	25	100

Source: Field work, 2010.

This study used 25 respondents from the three communities. Eleven representing 44 percent are from Cape Three Points while 7 each are from Ntakrom and Akwadae. This selection was based on the proximity to the drilling site. Cape Three Points is the closest hence more people were selected from there. In addition, other people who had vested interests in the activities of the oil production were interviewed.

4.4.1 EDUCATIONAL ATTAINMENTS OF RESPONDENTS

One of the ways to determine the level of preparedness to be able to adapt to a loss of a means of livelihood is by assessing the educational attainments of the local people. This may show the skills and knowledge they have to go into other businesses.

Table 9 - Distribution of Educational Level of Respondents

Educational Level	Number of responses	Percentage (%)
Primary	13	52
JHS/MSLC	5	20
SHS/Vocational school	2	8
Training College	1	4
Tertiary	-	-
None	4	16
Total	25	100

Source: Field work, 2010.

Table 9 presents the educational background of the local residents I interviewed. More than half (52%) of them only had education up to the primary level while 16% had none at all. Five and two people representing 20% and 8% respectively had education up to the JSS or MSLC level and SSS/Vocational School level. None had education up to the tertiary level but one completed a training college. The educational attainment of the respondents has a great implication to the level of their skills development. It is no wonder that fishing has been their best employment opportunity not only because of their lack of education but also what their parents introduced them into at a very early stage in their lives.

If this statistics is to be used as the background information for deciding on an alternative means of livelihood, then education should be one of the most important considerations. The provision of classroom blocks and other logistics then becomes imperative for the youth to acquire knowledge and skills in other fields to become employable and not follow in the

footsteps of their preceding generation who are battling with the less opportunity for fishing currently being experienced. This state of affairs implies that even a chain of employment opportunities the oil industry may create will be inaccessible to them.

4.4.2 VALUE OF ASSETS

In order to ascertain the concerns raised by the fishermen, the value of assets owned by the fishermen before and after the loss of fishing opportunities was found out.

Table 10 - Value of total assets for fishermen

Value of total assets (in Ghana Cedi)	Respondents		Percentage difference
	Before ban on fishing	After ban on fishing	
1,000-3,000	4 (16%)	7 (28%)	12%
4,000-6,000	9 (36%)	12 (48%)	12%
7,000-9,000	7 (28%)	4 (16%)	12%
Above 10,000	5 (20%)	2 (8%)	16%
Total	25 100%	25 100%	

Source: Field work, 2010.

Table 10 presents the total value of assets declared by the fishermen in the three communities before and after banning fishing within the exclusive zone of the oil production. Before the ban on fishing was imposed, 9 (36%) out of 25 people interviewed had a total asset of between 4,000- 6,000 Ghana Cedi but after the ban the number increased to 12 (48%). This happened because they had to sell some of their assets in order to make a living. For those who had a significant total asset of above 10,000 Ghana Cedi, the number fell from 5 (20% of respondents) to 2 (8% of respondents). The reduction in the assets here implies that more people are finding it difficult to make a living on fishing. This therefore calls for other means of livelihood.

4.4.3 NET INCOME FOR THE YEAR PRIOR TO AND AFTER THE BAN

For a better understand of the effect of the loss of fishing opportunities to the known, the study found out the net income for the fishermen the season before the full implementation of the ban on fishing.

Table 11 - Net income declared by fishermen in the last year before and after ban.

Net income (in Ghana Cedi)	Respondents		Percentage difference
	Before ban on fishing	After ban on fishing	
1,000-3,000	2 (8%)	12 (48%)	40%
4,000-6,000	7 (28%)	11 (44%)	16%
7,000-9,000	9 (36%)	2 (8%)	28%
Above 10,000	7 (28%)	-	-
Total	25 (100%)	25 (100%)	

Source: Field work, 2010.

The net income of fishermen in the year before the ban was introduced was analysed. 8% of the respondents made a net income ranging between 1,000-3,000 Ghana Cedi before the inception of the ban. This figure rose to 48% after the institution of the ban. 7 people (28%) made a net income of 10,000 Ghana Cedi before ban on fishing but after the ban none could make that income. This clearly shows how the purchasing power of the fisher folk has been weakened. This is having a dire consequence on the payment of school fees for their wards, medical expenses and even having a decent meal in a day.

4.4.4 FINANCING FISHING ACTIVITIES

Financing a business is one of the most challenging issues to deal with. The fishermen used various sources by which the raised funds for their activities. This is explained below.

Table 12 - Sources of finance for fishing activities

Sources of finance for fishing	Respondents	Percentage (%)
Financial institution	4	16
Individuals	5	20

Credit union	2	8
Self-financing	11	44
Family	3	12
Total	25	100

Source: Field work, 2010.

Over the years, the fishermen have been depending on a number of sources of finance for their fishing operations. Sources of financing coming from individuals, self and family, making a total of 86 % are internally generated while 14% are from lending institutions. The fact that the net income base of the fishermen (Table 12) has dwindled gives cause to worry since their ability to continue financing fishing has been dealt a big blow. The fishermen were unanimous in their explanation that this statistics is for the peak season and not the lean season. People who are employed in fishing-related activities expressed worry over their future since most of them have not had only their incomes reduced in the last six months but also the very availability of employment is eluding them.

4.4.5 OTHER MEANS OF INCOME

The fishermen together with their households showed how they have been adapting to mitigate their losses. This came from their off-season activities and what their family members were engaged in.

Table 13 - Income from fishing-related activities of family members (household).

Type of work	Who in family	Net income
Net mending	Son	2,000 Ghana cedi/season
Fish smoking/mongering	Wife and Daughter	6,000 Ghana cedi/season
Fetching firewood	Son	1,000 Ghana cedi/ season

Source: Field work, 2010.

The loss of opportunity for fishing did not only affect the fishermen directly but also those who are employed in fishing-related activities such as mending of nets, boat-making, fetching of firewood for fish smoking and fish mongering. Of the 25 respondents, each had a member of family involved in a fishing-related activity. The unemployment that is being created does not only rest on the fishermen but their entire households.

4.4.6 OIL IMPACTS ON LIVELIHOOD

It is expected that the oil operations within the region would affect the lives of the people. For the respondents gave different opinions. It was difficult to tell how exactly it will create opportunities for them.

Table 14 - Impact of oil operations on household livelihoods

Impact of oil operation on livelihoods	Respondents	Percentage (%)
Very negative	5	20
Negative	9	36
Positive	3	12
Very positive	2	8
Indifferent	6	24
Total	25	100

Source: Field work, 2010.

The study sought to find out from respondents about their perception on how the oil operations would affect their chances of living. While a total of 14 respondents (56%) expressed a negative influence, 6 (24%) were indifferent and could not tell how exactly they will be affected. However, 5 respondents (20%) were of the view that the oil activities would have a positive effect on their lives and increase their chances of a better life. From this presentation, the popular perception shows that the residents are not very certain whether the oil find would affect them positively but drawing from the experiences of other regions of the world where oil activities are going on, they foresee a similar negative influence on their livelihoods. Already, there are signs that the immediate environment would have its own brunt of oil pollution. Some of the fishes being caught were found dead even before they were caught. According the fishermen this is likely due to the flow of oil on the water surface.

4.4.7 ADAPTATION MECHANISMS

Having found themselves in a situation that requires a strategy to be able to survive for the short term, the local people had to use a portfolio of mechanisms to be able to cope with and adapt for survival.

Table 15 - Coping and Survival strategies

Coping Strategy	Respondents	Percentage (%)
Engaged in non-fishing activities	4	16
Sold assets	3	12
Used bank saving	2	8
Used income from family businesses	5	20
Received help from friends and relatives	1	4
Reduced household expenditure	7	28
Borrowed money	3	12
Total	25	100

Source: Field work, 2010.

Following the increasing loss of livelihood opportunities for people engaged in fishing and fishing-related activities, the people living in the three communities have adapted some kind of survival strategies which have kept them close to a year now. In addition, some have shifted more attention to farming and other businesses to generate some income. Table 15 shows the means by which the respondents had income to live on as a survival strategy. Seven people (20%) had to reduce their household expenditure as a means of conserving money. This implies that some essential services like medical care had to be sacrificed for education and food.

4.4.8 DEPENDENCY ON FISHERMEN

The weight of a coping and a survival strategy is directly linked to the number of dependants a family head has to shoulder. The fishermen gave a breakdown of the number of people they have to care for even in the face of their difficulties.

Table 16 - Number of Dependants on each fisherman/ Household size

Family size per household	Respondents	Percentage (%)
2-4	8	32
5-7	11	44
Above 8	6	24
Total	25	100

Source: Field work, 2010.

In order to determine the weight of responsibility on the respondents, the study sought to find out the number of people in each household. This gives a reflection of the responsibility placed on the shoulders of each fisherman. As shown in Table 16, six respondents (24%) said they have eight or more people in their households while 11 (44%) have between 5-7 people. The least number in a household is between 2-4 people.

4.4.9 LAND MANAGEMENT

The loss of fishing opportunities is not the only problem the local people have to contend with. As a means of survival some have to sell their land to be able to cope with the shocks for the short-term while other maintained theirs. The breakdown of how land was management in the aftermath of the dwindled fishing opportunities is given below.

Table 17 - Land Issues

Land administration within the communities	Responses	Percentage (%)
Land acquired by government from local people	11	44
Maintained land	9	36
Sold Land to would-be investors	5	20
Total	25	100

Source: Field work, 2010.

In addition to fishing equipment and boats, some of the local people own land either as individuals or as families. Though the operations of the oil companies at this stage are mostly concentrated at the downstream level the need to secure land for the upstream operations was equally important. The government has therefore acquired land from the local people on the terms of paying compensation. 11 (44 %) agreed to sell their lands to the government while nine people were not affected by this exercise and have therefore decided to keep their lands. The rest have sold their lands to would-be investors. The government has, in addition to paying a one-time compensation, decided to pay a special attention to the development of the area to raise the living standards of the people.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATION

5.0 INTRODUCTION

This chapter discusses the conclusions arrived at based on the responses elicited from the respondents on their livelihood state and provides recommendations by which the local people could be helped.

5.1 CONCLUSIONS

From the analysis of the data, the following conclusions were reached. An assessment of the responses the oil company gave shows that they are very much committed to improving the livelihood conditions of the local people in general and the fishermen in particular. This is being done through the corporate social responsibility initiatives. This goes to explain the point that there is enough evidence to show that there are current prevailing conditions aimed at improving the coping strategies of the local people.

It can also be established that there are strong, sustainable regulatory frameworks to guide or induce a responsible behaviour of oil companies. The companies themselves have a programme in place to measure their activities internally. In addition, ministries and agencies that are to collaborate attested to the fact that they are actively involved in whatever is happening in the oil industry.

From what stakeholders at the local level portrayed, their involvement in the implementation of projects for the benefits of the communities may be restricted though they are well represented in all fora where their livelihoods are discussed.

Generally, the introduction of the ban has had very negative consequence on the livelihood opportunities of the people but they have been able to adapt to the conditions. This they attributed generally to their own coping strategies.

5.2 RECOMMENDATIONS

From the conclusions reached, a number of recommendations are given to be considered for implementation.

5.2.1 Management of Expectations

Since the news broke out that Ghana will soon become an exporter of petroleum, expectations among Ghanaians have been high. This came as a result of political promises that were made. Particularly, people living close to the operations' site have been promised a better quality of life in an event that they voted for one particular party. Only the positive effects were stressed without making the negative consequences clear. According to the World Bank projections, actual significant revenue Ghana stands to benefit from may not be realised until 2013 by which time the production would have peaked. This claim favourably goes with the assumptions held by the majority of the respondents that the oil find would not have a positive impact on their livelihoods opportunities.

The success and progress of the oil operations partly lies in the lands of the local fishermen. Though there are some development projects lined up to be implemented, the local people still think there is more to be done. The realities of a project of this magnitude, being the first in Ghana, have to be made clear for the local people to begin adjusting their minds as to how to cooperate.

5.2.2 Creation of Employment

The study showed that majority of the people in the three communities is engaged in fishing or in fishing-related activity. The placement of a ban on fishing with no promising alternative sources of livelihood would have serious consequences on their survival. On the creation of jobs, there is no specific or concrete measure in place except for the promise that the local residents would take advantage of other short to medium term employment opportunities that may be generated. The main discussions going on in terms of employment opportunities is on the local content; an agreement that will provide direct employment to be offered to Ghanaians. Negotiations being reached indicate that up to ninety percent of the employees would be Ghanaians who have expertise in the oil industry.

The fact that this opportunity is reserved for highly skilled personnel means local people are exempted from this offer. In oil and gas exploration and exploitation, there are few opportunities for jobs. It is estimated that up to about 670 staff in total will be directly employed at the peak of the Jubilee project reducing to about 300 during the operational phase (KITE;2010). However, for ancillary business activities like real estate, telecommunications, banking, insurance, weather forecasting, search and rescue services, transport and catering

services, there seems to be unlimited opportunities for local residents and other Ghanaians who may migrate to the region in search of jobs. It is expected that many of the youth within the communities would be drafted into a skill development such as the National Youth Employment scheme to develop some vocational skills that would make them employable. In addition, the youth who are already into a form of artisan work should be helped to establish and improve on their businesses.

5.2.3 Provision of Infrastructure

For small scale industry set up to take off, the area should be hooked onto the national grid as a matter of urgency. Other essential services such as a health post, a police station and a post office must be provided to these communities to facilitate socioeconomic development. The government has earmarked a project aimed at expanding the Takoradi harbour to include a bigger area for local fishermen to use for landing. The construction of this facility is expected to draw most of the local fishermen within the Ahanta West District away from the area close to the rigs. Dilapidated road network is one major problem the local inhabitants have had to contend with over the years. For any economic project to succeed, the roads have to be given a face-lift by getting them tarred. This in no small way will boost the tourism development of the District as a whole.

5.2.4 Fulfilment of Promises

As part of its commitment to community development, Tullow Ghana Limited has refurbished the Science laboratory of the Half Assini Senior High school to the tune of \$250,000. It has also constructed 26 Water Bore hole and wells to many communities within the Western Region to serve about 30,000 people (Tullow Ghana, 2010). The company, in collaboration with Sight Savers International, has distributed Mectizan tablets to over 1,000 people in three districts in the Western Region to the tune of about \$100,000. It has also made a commitment to build a state-of-the-art hospital to serve the people of the Western Region and beyond. Despite these achievements, a lot still need to be done in terms of providing sustainable alternative sources of livelihood.

5.2.5 Educational Endowment Fund

One observation made in the communities showed that the children drop out of school or only end up at the Junior High school level and take to fishing. Having realised the need to acquire

employable skills even in the ancillary jobs that would be created through the oil exploitation, the local communities are calling for the establishment of an educational endowment fund that would support the brilliant children to continue through to the Senior High school(SSS) level. Though the focus of the study was to assess the indicators that are affecting the chances of living to the fishermen at present, the ultimate for the good of the communities would be realised when the youth are re-positioned to take up other challenges outside the fishing industry. This makes it imperative for the district assemble to team up with the oil companies to direct most of their efforts at the youth. In addition, the Alaska-style of oil fund (Palley, 2003) can be considered for the local people.

5.2.6 Management of Oil Fund

The key to the realization of the benefits inherent in a resource lies with how it is managed. In discussing how the revenues are to be managed several proposals have been put forward. There are different accounts that are to be set up. At this point in time, there seems to be a consensus that Ghana should use the oil resources as collateral to source loans from international financial institutions for infrastructural development. What is still not clear is the percentage to be used for the collateralization and the time frame within which it should last.

It is at this stage that Ghana must exercise caution so as not to sow the seeds of mismanagement that would lead the country to the doldrums of an economic stagnation. Revenue from the oil proceeds should be invested not only in the development of infrastructure but also other sectors of the economy that will create jobs not only for the people of the three communities but the whole country as a whole. According to the Ghana Statistical Service, Ghana has achieved a lower middle-income status after its Gross domestic Product (GDP) was quoted at GH ¢ 44.8 billion (GSS, 2010:2). This impressive feat is an indication that the country would experience a higher economic growth in the coming years.

5.2.7 Development of Institutions

Economic development, poverty reduction and job creation are intricately-linked. To operationalise these, a country must have strong institutions. Since 1992 to date, Ghana has been able to commit herself to democratic governance. The three arms of government as well as all state institutions have been empowered with the necessary legislation. It is expected that the administration of justice would prevent corrupt practices within the oil industry in order for the generality of Ghanaians to realise the full benefits of the oil find. It is also expected

that the rights and welfare of the local residents would be duly catered for as provided by the laws of the land.

5.2.8 Environmental Management and Technology

Environmental management in the 21st century relies strongly on local and international environmental laws and well as technology. The record of the oil companies over the years coupled with the modern technology being used can guarantee that they have the capacity to deal decisively with any environmental problems that might arise in case of any eventuality. As per the agreement, the Ghana National Petroleum Company is to develop the gas infrastructure for the gas to be transported and utilised. However, this has not been put in place as at the time of this study. This gives cause for worry since excess gas may be flared into the atmosphere. This is a major environmental problem that should be taken seriously and addressed as soon as practicable.

5.2.9 Livelihood Options

In devising an adaptive strategy for living, most of the people engaged in fishing-related activities have gone into trading and farming. These are possible alternative means of livelihood that should be invested in to give an economic empowerment to the local people as a source of hope of life. The government can set a micro credit scheme up for the people to apply for loans to expand their small scale businesses.

The management of this scheme should be entrusted into the hands of an independent body under the supervision of a board. The local residents should be encouraged to form cooperatives to go into farming of non-traditional export crops on large scale. The assurance that the area would be experiencing an influx of migrants offers a good prospect for a market. For those who would be doing fishing alongside any other business, there should be collaboration between the fishermen and the oil companies.

In conclusion, it is fair to say that Ghana can escape the natural resource curse other oil producing countries suffered from. Ghana has all it takes to do well on a resource management of this magnitude. Having learnt from the failures of its counterparts and with vibrant democratic governance, there seems to be a second emerging model after the success chalked by Norway in natural resource management. With an increasing economic growth rate and a good performance on the MDGs, the expectation for the generality of Ghanaians

and most especially the local populations along the Cape Three Points region is a better quality of life.

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Appendix A

Household Questionnaire

Questionnaire for heads of households

This questionnaire is strictly confidential. Any response or information given is solely for academic purpose.

Section A: Background information of respondents.

Name of village.....

Respondent/ Head of family (no.).....

1. Age:.....
2. Sex: Male Female
3. Educational Level: Primary JSS/MSLC SSS/Vocational education
Training College University None
4. Marital Status: Married Single Divorced Separated Widowed
5. What is your main occupation?.....
6. Number of dependants.....
7. Type of residence: Rented Owned other

Section B: Livelihood activities and opportunities

A . Fishing Activities

8. How many boats do you own?.....
9. What was your average yearly income?.....
10. What is your current average yearly income?.....
11. How was fishing organised before the barn on the use of the sea?.....
12. How is fishing organised at the moment?.....
13. Do you belong to any fishing association? Yes No
14. What was your average yearly catch?.....
15. What is the value of your total assets in fishing?

Asset Value (in Gh. Cedis)	Tick
----------------------------	------

1000-3000	
4000-6000	
7000-9000	
Above 10000	

16. Have you lost land to the oil drilling activities? Yes No

17. If yes, how much land have you lost?

18. Were you compensated? Yes No

19. What other livelihood activities are you engaged in during the lean season for fishing?.....

20. What was / are the sources of finance for your fishing activities?

Financial Institution Individuals Credit Union Self-financing
Family Other (Please specify)

21. How much do you spent on fishing inputs?

Input item	Amount
Boats	
Premix Fuel	
Labour	
Outboard motor	
Nets	
Others	

22. Have you been having difficulty in accessing premix fuel? Yes No

23. If yes, please

explain.....
.....
.....
.....

24. Do members of your family earn income from any fishing-related activities? Yes

No

25. If yes,

What type of work/activity?	Net income

26. Have you sold land to would-be investors? Yes No

27. If yes, what was the land previously being used for?.....

.....

28. What has been the effects of the loss of the sea

access?.....

.....

.....

29. How has the loss of fishing opportunities affected you household income from other fishing-related activities?

Who in household?	Activity affected	Effect

B. Impact on income from other sources/ assets

30. What other income sources/assets has your household lost to the oil industry?

Who in household?	Activity/Assets

31. How do you perceive the impact of oil drilling on your household livelihood?

Very negative Negative Positive Very positive Indifferent

Section C

Coping and Survival Strategies

32. How did your household manage to cope after losing your main source of livelihood?

Coping Strategy	Tick
Engaging in non-fishing activities	
Sold assets	
Used bank savings	
Used income from family businesses	
Received help from friends and relatives	
Reduced household expenditure	
Borrowing money	

Appendix B

Questionnaire for Institutions

Questionnaire for representatives of NGOs, District Assembly officials, Traditional Authorities, etc.

1. Name of Institution.....

2. Position of responsibility.....

What do you think are the main problems created by the barn on fishing within the catchment area of the oil drilling activities?.....
.....

3. Is your department actively involved in negotiations and implementation of any alternative livelihood programme? Yes No

4. If yes, please explain your role.....
.....
.....

5. Are there provisions made in terms of alternative livelihood means to cushion the local residents from loss of their livelihood source? Yes No

6. If yes, what are these livelihood sources?

Source of livelihood	Tick
Education and Training	
Payment of monetary compensation	
Offering of non-fishing employment	
Other (Specify)	

7. Are you satisfied with how these alternative livelihood means are being implemented? Yes No Give reasons.....

.....
.....

In your opinion, would the right beneficiaries be catered for? Yes No

8. If no, give reasons.....

.....

11. What do you think the government and the oil companies need to do to foster cooperation with the local residents?

.....

.....

.....

12. How would you rate the involvement of community leadership in negotiations on alternative sources of livelihood?

Very bad Bad Good Very good

13. Are there any government/NGO-sponsored programmes already running? Yes
No

14. If yes, what is the focus of the programmes?

Increasing and diversifying on and off farm income generation

Increasing community-based tourism enterprises

Developing rural small and medium scale enterprises

Increasing access to rural financing

Appendix C

Questionnaire for Representatives of National Institutions {Environmental Protection Agency (E.P.A), Min. of Lands and Natural Resources, Min. of Environment, Science and Technology, Min. Of Energy}

1. Department (Please state).....
2. Is there any environmental law in the country regarding oil drilling activities at the moment? Yes No
3. If yes, what is the present environmental law on oil activities in Ghana at the moment?
.....
.....
4. Is there any strong collaboratory efforts being made between your outfit and the oil companies in minimising potential environmental hazards? Yes No
5. How has your outfit/department been involved in drawing a regulatory framework for oil companies?
Very actively involved
Actively involved
Not actively involved
Not involved at all
6. Has your outfit got the necessary mandate or capacity to ensure that oil companies observe environmental laws? Yes No
7. If yes, what measures will your department adopt to enforce the environmental laws?
.....
.....
.....
8. How effective will the monitoring be?
Very satisfactory
Satisfactory
Relatively Satisfactory
Not sure
Comments.....
.....
.....
.....
9. How will your outfit ensure that adequate compensation is given to local residents who are negatively affected by the activities of oil drilling?
.....
.....
.....
10. How will the local people get information on beneficiary packages?
Through Assembly member

- Through chiefs
- Using the mass media
- Personal contacts

11. Are there well established and accessible media through which local residents whose rights are abused may channel their grievances? Yes No

12. How are the local people being educated on activities connected to oil drilling?

- Through their local representatives
- Seminars organised by oil companies
- Peer education
- No education at all
- Other (specify)

Appendix D

Questionnaire for Representatives of Oil companies.

1. Name of company.....
2. Position in company.....
3. How many communities are affected by the oil drilling?.....
4. Is there any comprehensive corporate social responsibility package put in place for the benefit of local residents? Yes No
5. If yes, what programmes are in the package?
.....
.....
.....
6. How sustainable are these programmes?
Very positive Positive Not sustainable enough other
7. Local residents are complaining they may not reap the benefits of the oil revenue. What is your opinion on this?
.....
.....
.....
.....
8. What is the relationship between company executives and community leaders?
Very cordial Cordial Uncooperative Don't know

(Additional Comments)

.....
.....

9. How would you describe the company's environmental impact assessment framework? Very good Good Needs Improvement Other
10. What has been local residents' reception of the oil companies operating around Cape Three Points? Very warm Warm Indifferent other

Other comments:

.....
.....
.....
.....