

The Operational and Economic Impact of Crude Oil Exploitation on Fishing Activities in the Jomoro District of Ghana

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Abstract: This study explores the operational and economic impact of crude oil production and exploitation on fishing activities in the Jomoro district of the Western Region of Ghana since 2010, the year of commercial production of crude oil in Ghana. In all, 40 respondents were sampled for the study using a purposeful sampling approach. The respondents, who were drawn from the Half-Assini, a fishing community in Jomoro district, were grouped into three major categories: ‘fishermen, fishmongers, and households referred to as consumers’. Interview guides and observation strategies were the main research instruments that were designed and administered for data collection. The study revealed that the general perception of respondents’ was earlier positive because they were expecting the oil and gas activities to boost their livelihood operations. The result, however, shows that the standard of living of the community has dropped caused by lack of many social amenities in the community and limitations imposed by authorities on their fishing activities. The study concludes that the oil and gas exploitation activities had caused great reduction in the quantity of fish catch as a result of the high lighting system used at the oil rigs which attracts fishes away from their operational domain of the fishermen. The study recommends the relaxation of rules to ensure that locals are not deprived of the fishing resources which constitute their social and economic mainstay.

Keywords: Jomoro, fishing activities, impact of crude oil, economic, operational, Western Region.

1. INTRODUCTION

Oil and gas exploitation has been seen as a panacea to many a country’s economic quagmire, that once a country discovers oil and gas, all its ‘economic woes are resolved’. Such was the pageantry that characterized the announcement of the oil discovery in commercial quantities by the Jubilee partners off the Cape Three Points when samples displayed in a plate were presented to the country’s president at the time in 2007.

Crude oil has become an important resource in our lives today that it is almost impossible to live without it because of the unique role it plays. Consequently, countries today have become politically and economically independent because of the lucrative nature of this commodity. Although mineral exploitation is a major source of income, the environmental and social costs far outweigh the benefits; that is to say if the entire exploitation process is not monitored and controlled, the citizens do not see the significant development accruing from the exploitation. Natural resource management has posed many challenges to several nations such as Nigeria, Angola, Equatorial Guinea and Cameroon which have been drilling crude oil for several decades now. Instead of being a blessing and boosting their economies, the local residents have become poorer thereby developing hostile attitudes to the operation of the oil companies.

As some countries have made bad strides after discovery of oil, others too made good strides out of the same resources. A good case to point is Norway which was known to be the poorest country in Scandinavia in the late 1960s but rose to be the wealthiest in the 1990s as a result of the discovery and exploitation of oil in 1969. This success was achieved due to the country’s ability to prevent rent-seeking and attendant corruption practices which undoubtedly, have been identified as the basis of the resource curse in many countries.

Oil is a vital source of energy for the world and will likely remain so for many decades to come, and even under the most optimistic assumptions about the growth in alternative energy sources. Most countries are significantly affected by developments in the oil market, either as producers, consumers or both. After a long exploration along its coast, Ghana 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 many sites where the oil 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.

Due to the enormous financial resources that can accrue from this industry, the discovery of oil in any location, particularly developing countries, is greeted with great optimism. In the case of oil exploitation and production in Ghana, it was expected to induce socioeconomic, environmental and cultural changes on the people of Jomoro and its surrounding communities. The oil and gas industry is considered to be presenting opportunities and threats to local residents living close to production sites. Though the general perception has been that the revenue of the oil and gas will boost a country's economy, most often than not, the threats far outweigh the opportunities, at least in the short run. The occurrence of this scenario leads to what is known as the "paradox of plenty" and the subsequent "resource curse" syndrome that usually bedevil many oil resource nations.

Test drilling of Ghana's oil commenced a few months after its discovery leading to a commercial production which started in the latter 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. Fortunately the rise in production is met by a high demand as global energy needs continue to rise. It is estimated that the level of development in terms of economic and social progress in every society is strongly correlated with its energy consumption per unit of the individuals that make up the society (Bergasse, 2013).

On the whole, the agreements that are signed between the multi-national oil companies and government should adequately take into consideration the livelihood of the affected oil-fishing communities. The chiefs, opinion leaders and civil society organizations have called on political leaders and the oil companies to consider the views of the affected fishing communities when designing fishing and oil exploitation policies. It must be reiterated that although Ghana's oil find and exploration activities occur offshore, legislations governing its exploitation and production are likely to restrain the fishing opportunities of the local fishermen. Already the fishermen are raising concerns about the restriction on fishing activities to about 500km radius from the oil rigs and its likely impact on their livelihood since they have no viable economic activities aside fishing. In these oil communities there has been an increase in payment of utilities, high payment of accommodation by local citizens, high traffic congestion, high pressure on social amenities, high unemployment rate, high poverty, poor health care facilities, and increase in transportation fare and, inequalities in distribution of interventions.

The fishing and oil industry are intertwined in a complex relationship around the world. Oil is a blessing for national treasuries, and a curse when offshore spills and well blowouts causes damage to fisheries and fishing communities. In addition, oil production comes with a huge environmental challenge especially at a time when climate change and its negative consequences have captured global attention. According to Badgley (2011), since the commencement of Ghana's oil exploration, the number of supply vessels on Ghana's territorial waters has increased leading to the destruction of some Ghanaian boats and canoes without any compensation. Some ocean mammals such as whales also continue to die mysteriously raising concerns about the safety of marine life.

In all these celebrations, Ghana forgot entirely to situate the oil find in the existing marine biota and its significance for the domestic and national economy. As a country, the authorities have neglected the fishing sector so much that even civil societies with socialistic biases have landed themselves in the capitalistic debate of revenue and private sector influences. The fishing and oil industry are intertwined in a complex relationship around the world. The question is, "how has oil exploitation impacted on the fishing activities in Ghana as a whole and particularly in Jomoro?" and what measures have been put in place to mitigate the adverse impact of oil exploitation on fishing and fisher folks who are among the poor around the oil enclave? The answers to these questions are critical in order to secure livelihood and peaceful coexistence between the Ghanaian fisheries and petroleum sectors. This is because civil society focus is driven and directed by donor

interest, much to the neglect of the fisheries and related sectors. This study, therefore, seeks to identify the operational and economic impact of oil and gas exploitation and production on fishing activities since its discovery in commercial quantities in 2010 in the Jomoro District of Ghana.

Objectives of the Research:

The general objective of the study is to assess the impact of crude oil exploitation and production on the fishing activities in the Jomoro District of the Western Region of Ghana.

The specific objectives of the study are

- i. To identify the impact of oil and gas exploitation and production on the operational activities of fishermen in Jomoro district.
- ii. To identify the economic benefits and challenges posed by the oil and gas exploitation and production to the fishmongers/consumers in the Jomoro District.
- iii. To suggest ways of improving fishing related economic activities in the Jomoro district.

Research Questions:

The research sought to answer the following questions in order to adequately achieve the set objectives:

- i. How do the activities of the oil exploitation and production affect the fishing activities of the people of Jomoro district in the Western Region of Ghana?
- ii. How do the oil exploitation and production affect the economic livelihood of the fish related businesses in the Jomoro district of Western Region of Ghana?
- iii. What are the various ways of improving fishing related economic activities in the Jomoro district?

Scope of Study:

Natural resources management has been a subject of increasing debate particularly in countries whose economies rely on natural resources 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 covers from the time of the oil exploitation in commercial quantities, thus from 2010 to 2017. The geographical terrain is about Half Assini, the capital town of Jomoro district. The study was to find out how crude oil production affected fishing activities operationally and economically and how that has contributed to the development and well-being of the people.

2. LITERATURE REVIEW

The UNCTAD (2007) stated that the oil extraction has both political and social impacts. Oil find could be positive to the nation if managed well by creating job opportunities for the youth, promoting Small and Medium scale enterprises (SMEs), building schools, hospitals, electricity provision, and roads for rural or village communities.

There are a lot of employment opportunities emerging as a result of the oil and gas find. These opportunities are not found only in oil and gas industry but also in other sectors which have been given less attention. In other words, there are oil-related employment opportunities and non-oil related employment opportunities. But majority's attention is directed towards the oil-related employment opportunities due to the perception by the indigenes that oil jobs create higher income as compared to jobs found in other sectors of the economy (Akakpo, 2012).

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 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, 2007).

Ever since oil exploration started in Ghana on the Jubilee fields at Cape Three Points of the Western Region (Province), fishermen have been ban from fishing close to the oil rigs. This is because Tullow-Ghana Oil partners have earmarked a radius of 500 km from the oil rigs as a restricted enclave or fishing activities. According to the Ghana Statistical Service, Ghana's 550 km coastal stretch has a population 2.4 million people or 10 percent of the country's population who are

dependent mainly on the fisheries resources for their livelihood. Therefore, banning them from fishing in certain portions of the ocean would hamper their ability to cater for their families. Fisheries resources contribute 4.5 percent towards the Gross Domestic Product (GDP) of the West African country's economy, while many Ghanaians depend on fish for their protein and other nutritional needs. Therefore, restricting fishing activities because of the oil exploration could result in conflict between the fisher-folk and the operators of the Jubilee Fields in the near future (Kow, 2012).

Oil production all over the world is associated with oil spills or pollution which may cause health implications for the human lives from consuming contaminated marine fishes while components of the oil leak into the ocean can lead to public health issues (Tanor, 2016). Discovery of crude oil comes with many challenges if those in management fail to adopt proper measures to ensure effective use of the revenues from these resources to better the life of the ordinary Ghanaian, having in mind those who live nearer to the drilling sites. As a result of oil production across the globe, people and countries have been affected negatively by pollution and loss of main source of livelihood. Many of these people have become idle and frustrated. They are living without jobs and catering for their households is a challenge for them (Nguah, 2016).

3. RESEARCH METHODOLOGY

Progressively, the study relied on primary data collected through the administration of validated interview guides with selected stakeholders of the sector as well as field observation. For the purpose of this study, a total of 40 respondents were sampled using targeted and purposive sampling methods. The sampling methods were selected based on the fact that fishing activity, though social in nature, is a specialised primary activity with a very structured social hierarchy. And for that matter information sourcing needs to be done through the appropriate hierarchical approach. Basically, the choice of the survey interview as a tool for primary data collection is to establish a solid base of facts from which conclusions can be drawn, interpretations made and to determine future courses of action with regards to the social changes being brought about by the new economic activity. The primary data collection method helped the researchers to obtain valid and intelligent opinions and submissions from the respondents. The data gathered was presented using simple frequency distribution statistics.

Population, sample drawn and the sampling frame of the study:

Due to the unlimited movement nature of fisher folks in fishing communities it was difficult to determine the real population size of the fishing community in Jomoro. The study rather focused on the sample size and with a purposeful sampling approach selected 40 respondents for data collection. In drawing the 40 respondents, however, a sampling frame was developed so as not to miss any known and defined group of people needed for study. The target subpopulations for study were the fishermen, fishmongers and the households who consume the fish products.

Table 1: The Sampling frame

Target Population	Number Of Respondents
Fishermen	23
Fishmongers	12
Households	5
Total	40

Data Collection, Presentation and Analysis:

As could be deduced, a set of interview guides were prepared and administered on the sampled groups. The data collected covered gender distribution, age categorization, livelihood sustainability on fishing and related activities, occupational experience, and distances (with accompanying cost) covered in a trip. For the purposes of triangulation for validation of data, observation strategies were also developed to visually and experientially confirm the feedback from research participants. The data gathered was presented and analyzed as follows:

1. Age distribution of respondents:

The age distribution of the respondents which categorized the respondents into three: the youth as 18-30; the middle aged as 31-50; and the elderly as 51 and above, shows that the respondents were evenly distributed with a few more of youth category than others. Technically, this even distribution of the respondents could be interpreted as stagnated industry in the near future. The table 2 below demonstrates the details and findings.

Table 2: The age categorization of respondents

Age	Description	Frequency	Percentage (%)
18-30	Young	14	35
31-50	Middle age	13	32.5
51 +	Elderly	13	32.5
	Total	40	100

2. The occupational experience of the fishermen:

Fishing in coastal communities in Ghana is not just an occupation, it is a way of life. This lifestyle is often passed on from generation to generation. However, indigenes can move from one occupation into fishing related activities. All activities in a fishing community relies on fishing, therefore when indigenes commence fishing, they can remain in that economic activity over eras.

3. The livelihood sustainability of fishing and related activities:

The fishermen drew a comparison on how their fishing business used to be very lucrative in the years prior to the oil find and exploitation in 2010 when the oil exploitation and production started in commercial quantities. Responding to a question, 96% of fishermen interviewed said that the fishing business has not been lucrative in recent times as compared to the years prior to 2010 when the oil production was not in commercial quantities. The following reasons were stated;

- The high lighting systems used at the oil rig attracts the fishes and as a result, there is little or no fish catch when fishermen go on fishing expedition.
- Due to the direct relationship between quantity of fish catch and income, the low fish catch accounts for a drastic fall of revenue.
- In recent times, the fishermen ran at losses because of increased operational costs incurred with a corresponding inverse in the revenue they generate.

The remaining 4% of the respondents said that the fishing business although no longer lucrative as it used to be is quite manageable.

4. FINDINGS AND CONCLUSIONS

4.1 Effect of the oil exploitation on the economic livelihood of fish related business operators:

All fishmongers have been affected by the oil production. The study revealed that fishmongers were unhappy in recent days because they were being negatively affected directly by the oil production in their area. They claimed that since the fishermen sell their catch at high prices due to high operation cost they are unable to buy more fish for their businesses. This definitely leads to low revenue generation and its attendant social and economic challenges such as marital problems and child delinquency among others.

The fishmongers said some of their colleagues left the fish mongering business into new ventures because the fish business is no longer profitable, the revenue generated is low and they do not get any work to do when they are not able to afford the fish at the high prices that the fishermen sell it, and they cannot be idle while they have families to cater for. One disgruntled fishmonger stated,

“Fish prices are high, that is, one basin is sold at GH¢500 now, formerly, before the commercial oil exploitation in 2010, that would have been sold at GH¢270”.

Also, the restrictions on the fishermen not to fish in some 500km radius areas as a result of the oil exploitation limits the fishermen’s area of fishing operation and denies them of catching the big fishes which are usually attracted to the high lighting systems used at the oil rig.

4.2 Effects of oil exploitation on fishing-related activities:

All the fishmongers claimed they did not benefit from the oil exploitation. They rather complained bitterly about the lighting systems used at the oil rig and the restrictions the fishermen are made to comply with. The fish mongers lamented that they do not get fishes to buy from the fishermen and cannot take care of their families with the little revenue they

generate. Also, the prices of the fish are high because the fishermen incur extra cost in their operations and they shift those costs to consumers of fish. At times, “*we are idle, because apart from the fish mongering, we do not engage in any other economic activities*” said by the frustrated fishmongers.

Primarily, the study revealed that the general perception of respondents was earlier positive because they were expecting the oil and gas activities to boost their livelihood operations. These perceptions were fuelled by earlier signs of infrastructural development, and some level of employment due to increased business and investment opportunities.

However, the attendant increases in the cost of living, social vices, congestion, and poor sanitation show that the standard of living of the community has dropped considerably caused by lack of many social amenities in the community and limitations imposed by authorities on their fishing activities. The study concludes that the oil and gas exploitation activities had caused great reduction in the quantity of fish catch as a result of the high lighting systems used at the oil rigs which attract the fish away from the operational domains of the fisher folks.

5. RECOMMENDATIONS FOR STAKEHOLDERS

In order to help encourage and sustain fishing activities, a traditional occupation that have been the main source of livelihood of the people in and around Jomoro district over the years, the following recommendations have been suggested:

- (i) The government should consider adjusting the lighting systems used at the oil rigs to suit fishermen so that they can get enough catch during fishing expedition. The government can regulate the light used at the oil rigs to allow the fishes move away from the restricted area into the fishing area.
- (ii) The various stakeholders should erect lighthouses at the shores of these fishing communities to attract the fishes towards their direction of operation.
- (iii) The appropriate authorities should help lower the lights used at the oil rigs in terms of the height not brightness.
- (iv) The government should provide financial aids for the fishermen and fishmongers since their source of livelihood have been destroyed by the oil exploitation.
- (v) The government should provide jobs in the fishing communities so that those who do not engage in fishing related economic activities can get employed and earn money legitimately.
- (vi) The companies working on the oil rigs should be encouraged to provide their corporate social responsibilities to the fishing communities.
- (vii) The fishermen should be relocated to other communities that the oil exploitation has no/less impact on.

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