

PERCEIVED EFFECT OF CRUDE OIL PROSPECTING ON THE LIVELIHOOD OF RURAL RESIDENTS OF RIVERINE AREAS OF AKWA IBOM STATE.

ETUK, EKAETE ELIZABETH and ODEBODE, S. O.

*Department of Agricultural Extension and Rural Development, University of Ibadan, Ibadan, Nigeria.
ekalizzy@yahoo.com*

ABSTRACT

This study assessed the perceived effect of crude oil prospecting on the livelihood of rural residents of riverine areas of Akwa Ibom State whose livelihoods have been endangered by the extraction and production of crude oil. Data were collected using structured interview schedule administered on 229 household heads selected using simple random sampling procedure and also through Focus Group Discussions and In-depth interviews with key informants. Frequency counts, percentages, Chi-square, T-test and Pearson Product Moment Correlation (PPMC) were used in analysing the data. The study revealed that the major livelihood activities of the respondents revolve around the fishing industry, that crude oil prospecting is perceived to be negative by the host communities and also that the most severe constraints faced by the respondents are environmental degradation, lack of resources and high cost of fishing equipment. It was recommended that there should be promulgation and implementation of environmental laws and regulations to stipulate safe minimum standards by the oil companies, and investing in Human Capital: Livelihoods training enlightenment programs should be organised to provide information and training or link to agencies and companies that provide training in the skills needed to operate in the local economy.

Keywords: Effect, crude oil, oil prospecting, livelihood, Akwa Ibom

Introduction

The Nigerian oil industry has affected the country in a variety of ways. It has contributed immensely to the Gross Domestic Product of the nation and at the same time impacted negatively on the traditional means of livelihood of the people such as fishing and farming in the oil producing communities of the Niger Delta.

Rural dwellers are referred to as those who reside far away from the “Big cities” (Bolarinwa 2007). Fayose (2001) noted that the rural areas are characterized by poverty, illiteracy, high birth and death rates, unhygienic living conditions, little or no basic infrastructure such as potable water, hospitals, good network of roads, electricity and schools. Most of the rural dwellers are involved in agriculture either on full-time or

part-time basis, mostly non-literates or semi-literates and they constitute the majority of Nigeria's population (Aboyade, 1984)

It is said that the people in rural areas derive their livelihood in several ways such as livestock rearing, crop farming, fishing, hunting, petty trading, selling cooked foods/snacks, carpentry, palm wine tapping, bricklaying, blacksmithing, tailoring, hair dressing as well as working as civil servants (Olawoye, 2000). These livelihood activities are at the centre of human survival and well being. However, environmental degradation, insecure access to productive and natural resources and economic instability pose a threat to the sustainability of many of these livelihood activities (Olawoye, 2002). Carney (1998) further buttressed this point by noting that livelihood is only sustainable when it has the capacity to meet the immediate needs of the people while its

ability to meet future needs is not compromised.

As oil operations expand, so also do the large expanse of polluted arable lands, rivers, swamps and mangroves. The landscape is littered with polluted sites, waste pits and toxic dumps thus posing a great threat to wildlife, plants and other natural habitats in the wet and marshy terrain. The result is a threatened livelihood security and standard of living (Nzeakah, 2000). Oil spills are caused by a number of factors such as equipment failure, ruptured pipeline, blow out, corrosion of flow lines, overflow of tanks, hose failure, pressure in hose/pipelines, accidents, and sabotage among others. (Awobajo, 1981). Whatever the cause, oil spillage damages the environment and makes arable land and water unsuitable for agriculture. Depending on the degree of contamination, the effect can last for months or even years.

Ibena and Eastern Obolo are two of the oil producing areas of Akwa Ibom state and they play host to major oil producing multinationals. These communities have also witnessed a number of oil spills in the last four decades. Ibena and Eastern Obolo including Qua-iboe river estuaries communities have fishing as the major occupation of the inhabitants. Several incidences of oil spills have also threatened the source of income and livelihood of the inhabitants. Their natural habitat has been destroyed, soil fertility, fishing equipment as well as the ability of fish to reproduce has been greatly undermined. Therefore the ability of the livelihood of the people in Ibena and Eastern Obolo to meet their needs has been seriously threatened by the continuous exploration of crude oil and other activities of the oil industries that they play host to. Investigations reveal that crude deposits settle on fishing communities along the coastline in Ibena. The oil deposits on the beach also show that oil spills contaminate the waters and threaten fishing vocation of the communities.

Objectives

The objectives of this study were to:

- identify the socio-economic characteristics of the respondents in the study area.

- examine the livelihood activities of the respondents in the study area.
- determine the perceived effects of crude oil prospecting on the livelihood of the respondents in the study area.
- examine the benefits derived from crude oil prospecting by the respondents in the study area.
- ascertain the constraints to livelihood activities of the respondents in the study area.

Methodology

This study was conducted in Ibena and Eastern Obolo Local Government areas of Akwa Ibom State. The target population comprised of the rural dwellers in Ibena and Eastern Obolo local Government Areas of Akwa Ibom state (i.e. the economic group comprising men, women and youths in both local government areas). Simple random sampling technique was used to select five villages out of the 27 in Ibena and 33 villages in Eastern Obolo Local Government Areas. Systematic sampling method was then be used to select every 6th house in each village. A total of two hundred and twenty nine households were selected. Household heads were then interviewed. Focus Group Discussions (FGD) and In-depth interviews were used along with the administration of structured Interview Schedule for data collection.

Findings and Discussion

Socio-economic characteristics of respondents.

The result of the analysis as presented in Table 1 shows that majority (70.7%) of the respondents fell within the age range of 41-60years. The result implies that majority of the respondents are still economically active and could contribute effectively to the sustenance of their households.

The findings show that majority of the respondents (55%) were married implying that among the respondents the institution of marriage is held in high esteem. From the

findings, 30.1% of the respondents had no formal education while 44.1% had primary education. The implication of this is that a large percentage of the rural dwellers were not educated, therefore their literacy rate must be specifically considered when planning programmes for them as this will affect message dissemination and assimilation.. Sixty-two percent (62.4%) of the respondents were males, while 37.2% were females. The implication of this is that both sexes contribute to household sustenance as head of households. Traditionally, it is expected that a woman should be under the protection of a man in the household, however prevailing conditions of death, divorce, and separation have made quite a number of households to be headed by women. Research has shown an increase in female headed households both in developed and developing countries (Bumpass & Riley, (1995) in Buvinic (1991)).

The results show that 76% of the respondents were Christians. Religion involves a set of fundamental beliefs and ritualistic practices and shows the affinity of the respondents to God or the supernatural. Any livelihood activity that conflicts with religious beliefs and practices may not augur well for the community.

Data on the household size of the respondents show that 55% had a household size of between 6 and 10 people. This is an indication that there is an abundance of

household labor for livelihood activities. The results also show that the respondents are low income earners since 70.5% of them earn a monthly income below =N20, 000. Those with a monthly income of above =N20, 000 constitute 29.5% of the entire population. The low income level of the respondents suggests that a greater percentage of the respondents would find it difficult to meet their daily household obligations. As such savings and investments become impossible.

On the socio-economic status of the household, the results show that 74.7% of the respondents classify themselves as living below average, 8.3% average while 17% classify themselves as above average. This implies that most rural dwellers are poor and may likely need assistance in terms of credit facilities and other incentives the provision of which will have a positive effect on their livelihoods. It should however be noted that this is a self evaluation by the respondents.

The analysis also shows that 69.4% of the respondents are indigenes, while 30.6% were non indigenes. The implication of this is that as indigenes the respondents have more access to land, forest and other natural and human amenities available in their environment. It is also a confirmation of the ethnic background of the respondents which reveals that majority of the respondents residing in the study area are of Ibibio and Andoni origin.

Table 1: Distribution of respondents according to their socio-economic characteristics
N = 229

Variable	Frequency	Percentage
Sex		
Male	143	62.4
Female	86	37.6
Religion		
Christianity	174	76.0
Islam	24	10.5
Traditional	31	13.5
Household Size		
1-5	66	28.8
5-10	126	55.0
11-15	37	16.2
Income		
1000-20,000	162	70.7
Above 20,000	67	29.3

Variable	Frequency	Percentage
Household class		
Below Average	171	74.7%
Average	19	8.3
Better off than most	39	17.0
Total	229	100
Place of Birth		
IbENO/Eastern Obolo	159	69.4
Outside IbENO/Eastern Obolo	70	30.6
Total	229	100

Source: Field Survey 2011

Respondents' livelihood activities

According to Olawoye (2002), the western concept of occupation in terms of one activity by which all needs are met is not relevant to the experience of most rural dwellers in developing countries.

Results from the analysis show that 78.2% of the respondents indicated fishing as primary

occupation. Seventy percent of the respondents are involved in fish net making and repairs, crop farming (45.9%), processing of aquatic products (59.8%), and livestock rearing (28.4%). Also the respondents engaged in distillation of gin (14.4%), petty trading (39.3%), hairdressing/barbing (6.6%), transportation (39.3%) and tailoring (10.9%).

Table 4 Distribution of respondents according to their livelihood activities

Livelihood Diversification	Involved		Not involved	
	Frequency	Percentage	Frequency	Percentage
Fishing	179	78.2	50	21.8
Fish net making/net repairs	160	69.9	69	30.1
Crop Farming	105	45.9	124	54.1
Processing of aquatic products	137	59.8	92	40.2
Livestock rearing	65	28.4	164	71.6
Tipper/sand Filling	30	13.1	99	86.9
Distillation of gin	33	14.4	196	85.6
Petty trading/food selling	90	39.3	139	60.7
Hairdressing/barbing salon	15	6.6	214	93.4
Civil service	78	34.1	151	65.9
Arts/craft/furniture	90	39.3	139	60.7
Tailoring	25	10.9	204	89.1
Transportation/canoe	90	39.3	139	60.7

Source: Field survey 2011

Perceived effect of crude oil prospecting on livelihood activities.

Results in Table 2 show that 86.0% of the respondents believe that crude oil prospecting has led to increased population pressure in their area and this has an adverse

effect on their livelihood and the community as a whole. About 56.3% do not think crude oil prospecting has benefitted their livelihood, 41% indicated that oil company's operations have not been of any benefit to the community and 31% indicated that crude prospecting has helped in reducing the poverty level in my community.

Respondents argued that oil companies have taken over their farm lands (86.5%), oil company has provided employment opportunities for many people in this community (22.2%), and that their activities polluted the air and made them vulnerable to diseases (76.0%). However, some noted that their incomes have increased since crude oil prospecting began (23.6%), the presence of the oil companies have improved their standard of living (36.2%) and that the oil companies have provided them with livelihood-enhancing trainings (17.0%).

Others maintained that they have always been cheated by the oil companies (81.7%), oil companies have not helped in addressing their basic needs (71.2%), fishing in their community has been badly affected by the activities of oil companies (91.3%), their main source of livelihood has been stopped (81.7%). Some were of the opinion that the

oil companies lived up to their corporate social responsibilities (19.7%) while some maintained that the oil companies' activities caused conflict in their communities (50.2%).

The major implication of these findings is that the main sources of livelihood of the respondents have been destroyed and as such the level of poverty has increased. This has necessitated the search for alternative sources of income. The results indicate a shift from fishing which is the traditional occupation of the people to other activities as coping strategies to douse the effects of crude oil prospecting on their traditional livelihood activities. It can be further deduced that youth restiveness in these areas arise as a result of poverty brought about by the degradation of the environment through the continuous exploration and exploitation of the fishing environment.

Table 2: Distribution of respondents according to their perceived effect of crude oil prospecting in their communities.

S/N	STATEMENTS	AGREED	DISAGREED
1	Oil exploration lead to increased population pressure in my Area	197(86.0%)	24(10.5%)
2	Oil company's presence has benefited our Livelihood in no small measure	56(24.4%)	129(56.3%)
3	Oil company's operations have not been of any benefit to this community	96(41.9%)	80(33.9%)
4	Oil company has helped in reducing the poverty level in my community	71(31%)	110(48.0%)
5	Oil company has taken over our farm lands	198(86.5%)	16(6.9%)
6	Oil company has provided employment opportunities for many people in this community	51(22.2%)	135(59.0%)
7	Their activities pollute the air and make us vulnerable to diseases	174(76.0%)	26(11.3%)
8	Our incomes have increased since their activities began	54(23.6%)	119(52.0%)
9	Their presence has improved our standard of living	83(36.2%)	130(56.8%)
10	The oil companies provide us with livelihood enhancing training	39(17%)	147(64.2%)
11	We have always been cheated by the oil companies	187(81.7%)	16(7.0%)
12	They have not helped in addressing our basic needs	163(71.2%)	40(17.5%)
13	Fishing in this community has been badly affected by their activities	219(91.3%)	10(4.3%)
14	Our main source of livelihood has been stopped	187(81.7%)	27(11.8%)

S/N	STATEMENTS	AGREED	DISAGREED
15	The oil companies live up to their corporate social responsibilities	45(19.7%)	128(55.9%)
16	Their activities cause conflict in our communities	115(50.2%)	43(18.8%)
17	Oil companies have reduced poverty level in our community	91(39.7%)	131(57.2%)
18	Their activities have led to social vices	149(65.1%)	56(34.5%)
19	Without the oil companies our lives will be better	117(46.7%)	58(25.3%)
20	Oil companies employ us	60(26.2%)	132(57.6%)

Source: Field Survey 2011

Benefits derived from crude oil prospecting

The respondents (77.2%) believed that the oil companies have not lived up to their corporate social responsibilities in the areas of skill acquisition, increase in income

(62.9%), employment (77.3%), road construction (44.5%), and health (69%). Also, 95.2% have not benefitted in terms of scholarships, electricity (47.6%), potable water (54.6%) and empowerment (82.5%). These are areas in which the respondents claim not to have benefitted from the activities and presence of the oil companies. All these have a negative impact on the livelihood and well being of the respondents.

Table 3 Distribution of respondents according to the level of benefits derived from crude oil prospecting

Variable	No benefit	Low benefit	Medium benefit	High benefit
Skill acquisition	113 (49.3%)	64 (27.9%)	35(15.3%)	17(10.0%)
Increase in income	82 (35.8%)	62 (27.1%)	62 (27.1%)	23 (10.0%)
Employment	118 (51.5%)	59 (25.8%)	38 (16.6%)	14 (6.1%)
Road Construction	53 (23.1%)	49 (21.4%)	60 (26.2)	67 (29.3%)
Health	55 (24%)	103(45%)	62 (27.1%)	9 (3.9%)
Scholarship	195 (85.2%)	23 (10%)	6 (2.6%)	5 (2.2%)
Electricity	53 (23.1%)	56 (24.5%)	49 (21.4%)	71 (31.0%)
Portable water	78 (34.1%)	47 (20.5)	53 (23.1%)	51 (22.3%)
empowerment	166 (72.5%)	23 (10%)	29 (12.7%)	11(4.5%)

Source: Field Survey 2011

Constraints to livelihood activities of the respondents

Findings on the constraints to livelihood activities by the respondents are presented in Table 4. The results show that the major constraints to livelihood activities by the respondents are water pollution (78.2%),

lack of resources in terms of capital, human, financial (74.2%), low soil fertility(54.1%), high cost of fishing equipment(71.2%), poor processing and storage(73.4%), poor marketing outlet(24.5%) and lack of credit facilities(75.5%). Other constraints according to the analysis are deforestation (4%), poor transportation network (4%), and poor trading outlets (2%)

Table 4 Distribution of respondents according to constraints to their livelihood activities.

Constraint	Constraint		Not a constraint	
	Frequency	Percentage	Frequency	Percentage
Water pollution	179	78.2	50	21.8
Lack of resources	170	74.2	59	25.8
Low soil fertility	124	54.1	105	45.9
High cost of fishing equipment	163	71.2	66	28.8
Poor processing/storage	168	73.4	61	26.6
Poor marketing outlet	56	24.5	173	75.5
Lack of credit facility	173	75.5	56	24.5
Deforestation	10	4.3	219	96
Poor transportation network	10	4.3	219	96
Poor trading outlet	5	2	224	98

Source: Field survey 2011

Hypothesis Testing

Ho1: There is no significant relationship between the rural dwellers' selected socio-

economic characteristics. (age, marital status, religion, level of education, household size, primary occupation, monthly income) and their livelihood activities

Table 5 Relationship between some socio-economic characteristics (Age, monthly income and household size) of the respondents and their livelihood activities.

Variable	r	p	Decision
Age	-0.142	0.032	Significant
Monthly Income	0.072	0.279	Not significant
Household Size	-0.052	0.434	Not significant

r = correlation coefficient, p= significance level

Source: Data analysis, 2011

The result of the analysis as shown in Table 5 shows that a significant relationship exists between the age of the respondents(r= -0.142, p<0.05) and their livelihood activities. Therefore the null hypothesis is rejected and the alternative hypothesis is accepted. This implies that the livelihood activities respondents engage in and their level of involvement in such is a function of their age. This corroborates with Okoro (2004) who observed that as one grows older, one is likely to assume more responsibilities within the family or household because of the

increasing number and age of children or dependants. On household size, there is no significant relationship between the household size and livelihood activities in the study area (r=0.072, p<0.05). This shows that the activities of the oil companies do not discriminate between small and large households. The results further show that there is no significant relationship between monthly income and livelihood activities(r=-0.052, p>0.05). This implies that livelihood activities of majority of the respondents are either directly or indirectly linked with the environment where the raw effect of crude oil prospecting is evenly felt by all. Hence in this case, the null hypothesis is accepted.

Table 6 Relationship between socio-economic characteristics (sex, marital status, religion and educational level) of respondents and their livelihood activities

Variable	χ^2	df	p	Decision
Sex	7.786	1	0.005	Significant
Marital status	2.138	3	0.050	Significant
Religion	6.064	2	0.148	Not Significant
Educational level	12.662	3	0.005	Significant

χ^2 =chi-square value, p=significance level, df= degree of freedom

Table 6 shows that significant relationships exist between sex, ($\chi^2= 7.786$, $p<0.05$) marital status ($\chi^2 = 2.138$, $p<0.05$) and educational level($\chi^2 = 12.662$, $P<0.05$) of the respondents and their livelihood activities.

On educational level, it was discovered in the study area that the respondents with tertiary education were better off than their counterparts with little or no education. Although the educated respondents also engaged in fishing, they were able to gain better employment, had access to both human and material facilities that brought about an improvement in their standard of

living. This goes to show that educated people are more enlightened than the uneducated people. The results further indicated that there was no significant relationship between the respondents' religion ($\chi^2= 6.064$, $p > 0.05$) and effect of crude oil prospecting on the livelihood activities they engaged in. This implies that the activity of the oil companies on their livelihood as perceived by the respondents was not due to their religious inclinations.

Hypothesis 2

Ho2: There is no significant relationship between the perceived effect of crude oil prospecting and the livelihood activities of the respondents in the study area.

Table 7 Relationship between perceived effect of crude oil prospecting on the livelihood activities of the respondents

Variable	r	p	Decision
Livelihood activities	0.138	0.036	Significant

r= correlation coefficient, p= significance level

This result shows that there is a significant relationship between the perceived effect of crude oil prospecting and the livelihood activities of the respondents. This result may be attributed to the fact that the respondents feel very strongly about the continuous degradation of the environment brought about by the activities of the oil companies. This pollution of the waters destroys not only the marine life but the whole ecosystem of that region. Eteng (1997), as quoted by Owabukeruyele (2000), asserts that oil exploration and exploitation has over the last decades impacted disastrously on the socio-physical environment of the Nigeria Delta

oil-bearing communities. These threaten the subsistent peasant economy and the environment and hence the entire livelihood and basic survival of the people. (Okoro 2004). The null hypothesis is therefore rejected and the alternate hypothesis is accepted. This states that there is a significant relationship between perceived effect crude oil prospecting and the livelihood activities of the respondents in the study area.

Hypothesis 3

Ho3: There is no significant relationship between the constraints faced and the livelihood activities of the respondents.

Table 8 Relationship between constraints faced by the respondents and their livelihood activities

Variable	r	p	Decision
constraints	0.216	0.001	Significant

r= correlation coefficient, p= significance level

The results obtained show that there is a significant relationship (r= 0.216, p<0.05) between the constraints faced by the respondents and their livelihood activities. Therefore the null hypothesis is rejected and the alternate hypothesis is accepted. The implication of this is that water pollution, lack of resources, low soil fertility; high cost of fishing equipment, poor storage facility as well as poor marketing outlets affects the extent of livelihood diversification of the respondents and these were attributed to lack of commitment and social responsibility to the host community by the oil companies.

Conclusion

A number of conclusions can be drawn from results of major findings of the study based on the stated objectives and hypotheses.

- The major livelihood activities of the respondents revolve around the fishing industry.
- The crude oil prospecting is perceived to have a negative effect on the livelihood activities of the host communities.
- Most severe constraints faced by the respondents are environmental degradation, lack of resources and high cost of fishing equipment.

Recommendations

1. There should be promulgation and implementation of environmental laws and regulations to stipulate safe minimum standards of operation by the oil companies.
2. **Investing in Human Capital:** Livelihoods trainings and enlightenment programs should be organised to provide information and

training or link to agencies and companies that will provide training in the skills needed to operate in the local economy.

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