THE IMPACTS OF OIL EXPLORATION AND EXPLOITATION ON THE SOCIO-CULTURAL ENVIRONMENT OF OGUTA AREA, IMO STATE, SOUTHEASTERN

Eze, B. U. & Akhionbare, E. A

ABSTRACT

This paper explored the impacts of oil exploration and exploitation on the socio-cultural environment of Oguta Area of Imo state, southeastern Nigeria. It utilized survey approach in data gathering. Data analysis was done using descriptive statistics as mean, percentage and frequencies deducted from Linkert scaling method of four-point scale. Inferential statistical tools used were Z -test and chi-square statistics. The result showed the percentage of seriousness of socio-cultural impacts of oil exploitation to be 64.7%. The degree of seriousness varied across different variables considered. The percentage effect of these impacts on the lives of the people was also put at 60% which equally varied across different variables considered. On the adaptive responses to socio-cultural challenges resulting from oil exploitation, approximately 46% of the respondents adopted various adaptive measures for survival. The results of inferential statistical analysis showed that the socio-cultural problems of oil exploitation and its negative effects on the lives of the people were statistically significant. So, the activities of oil exploiters have touched on the traditions, customs, norms and values of the people. It is thus, recommended that the oil companies need to research into means to restore as much as possible the traditions of the people and equally preserve those that are still standing.

Keywords: impacts, oil exploitation, socio-cultural, environment

INTRODUCTION

Although petroleum resources sustain the Nigerian economy, industrial activities in the sector have been known to be associated with substantial environmental degradation and social crises. And this poses a potential threat to sustainable development in the Niger Delta where the bulk of the country's petroleum resources are located (Orubu et al; 2004). Though oil and other natural resources are considered to be national assets, this is not the case in Nigeria. The wide dichotomy of oil wealth and scarcity of social benefits has come to be known as 'The Oil Curse' (Birdsall and Subramanin 2004). Birdsall and Subramanin explain that there are thirty four (34) less developed countries that are rich in mineral and oil resources and that 12 (33%) of these countries have per capita income that remains less than $1 a day. Their health indices are poor, infant mortality high, literacy rate and life expectancy low.

The crude oil in Nigeria is derived from the Niger Delta area which is made up of nine states: Rivers, Bayelsa, Delta, Akwa Ibom, Cross River, Edo, Imo, Abia and Ondo; these have an estimated population of 28 million amounting to 16.7% of the Nigeria's population (Emmanuel; 2004).This area has suffered the dire effects of oil exploration with its attendant environmental

Department of Geography and Meteorology, Enugu State University of Science and Technology, Enugu, Nigeria

degradation for years. Ironically oil revenues account for about 95% of Nigeria's foreign exchange earnings and 95% of federal revenue (George; 2006). Billions of US dollars have accrued to the country from the combined operations of various oil companies including the Nigerian National Petroleum Corporation (NNPC), which conducts oil and gas business on behalf of the country (Alabi and Ntukekpo 2012). The NNPC operates mainly through joint venture contract, the greatest partners remain: Shell Petroleum Development Company, Chevron, Mobil, Texaco, Elf and Nigeria Liquefied Natural Gas Company (a subsidiary of NNPC).

According to Alabi and Ntukekpo (2012), the influx of oil companies and the heightening of their operations in the Niger Delta are not matched with an agenda for the development of Nigeria in general and the Niger Delta in particular. The oil companies claim to have executed several projects in the host communities as part of their corporate social responsibilities. The claims include construction of hospitals, roads and schools, provision of potable water, electricity, sponsorship, scholarships and supporting health campaign programs amongst others. The host communities however do not seem to acknowledge these acclaimed community development projects by oil companies as they continue in their hostile disposition to these companies. The hostility takes the form of pipeline vandalization, kidnapping, shutting down of oil installations, militancy, intra and inter-community violence.

Because of the high level of poverty in the core oil producing areas there are several social responses to the environmental problems which include among others youth restiveness, community clashes, hostage taking, kidnapping as well as AIDS outbreak. A United Nations Development Program (UNDP) report on the Niger Delta, describes the region as “suffering from administrative neglect, crumbling social infrastructures and services, high unemployment, social deprivation, abject poverty, filth and squalor and endemic conflict” (UNDP 2006).

The exploration and exploitation of crude oil in Nigeria has posed a myriad of environmental problems in the Oil rich Niger Delta region. Since the drilling of the first oil well in Oloibiri in present day Bayelsa State in 1956, 1,481 oil wells have sprung up, producing from about 159 Oil fields (Eregha, 2009). There are more than 7,000 kilometers of pipelines and flow lines and 275 flow stations operated by 13 oil companies (UNDP report, 2006).

There have been identified three major environmental problems associated with oil exploration; these are water pollution, land degradation and air pollution, these have a multiplier effect on the social and economic lives of people in the affected areas (Eregha, 2009).

According to Eregha (2009) the environmental problems in the Niger Delta are associated with a number of socio-economic problems which have multiplier effects. The economic effects include an alarming rate of unemployment in the Niger Delta with all the states with exception of Abia having a higher rate of unemployment than the average for Nigeria. This is as a result of loss of means of livelihood as polluted lands and water ways which means that fishers and farmers are thrown into a state of joblessness. Natural fallout of unemployment is an alarming rate of poverty and starvation as without a means of livelihood people are not able to buy food; those who might be reliant on subsistence farming for feeding are not

able to sustain it because of the loss of arable land and destruction of fishes.

Cultural problems identified which are fallouts of environmental pollution and the resultant economic multiplier effects in the Niger Delta include social disorder, conflicts, youth restiveness, hostage taking/kidnapping, rape, HIV prevalence and population displacement. Youth restiveness is a direct response to unemployment and poverty; and the high incidence of community unrest and militancy which has plagued the region within the last decade is a response to the negligence of oil operators to the basic needs of the people.

The oil-producing communities have basically remained dependent and under-developed, persistently disempowered, socio-culturally marginalized and psychologically alienated. (Eze, 2015). Citing Ofomata, Eze (2015) agreed that petroleum activities impact negatively on the social/cultural and economic environment of the oil-producing communities.

Majority of the studies on oil exploration in Oguta has focused on the environmental issues which arise from oil exploration and production but to a lesser extent on the effects on the lives of the people in the area, with regards to the changes on their socio-economic status, traditions, cultures and values. This study fills this gap.

Study area

Oguta lies within Latitudes 5^0 34' 20" N and Longitude 6^0 43' 10'' E and is located in Imo State of Nigeria and shares boundaries with Anambra, Delta and Rivers States; it lies within the lower Niger drainage basin. Oguta is the headquarters of the Oguta Local Government Area and is one of the only two crude oil producing local government areas in Imo State and is a socio-geographic town with a surface area of approximately 2,025.75 square kilometers.

Fishing and farming are the major traditional occupations of the Oguta people; the Oguta lake and other surrounding bodies of water provide source for fish and other aquatic life while the fertile farmlands of the surrounding area have been cultivated by the people for centuries. The major type of farming is subsistent but commercial farming also exists, the major crops which are cultivated in the area include Oil Palm trees, pineapples, plantains, yams, okra and vegetables.

The oil companies operating in the area have also provided a source of employment for local labor; some of the youths in the area are now actively engageD in the employment of oil companies; some fractions of the population engage in petty trading of fish and other agricultural produce while others are in the civil service.

Materials and methods

Survey research design was employed in this research. This involved the use of both fixed/structured and open-ended questionnaires, interviews and direct observations. Oil in commercial quantities is found in Oguta town, Ezi-Orsu, Orsu-Obodo and some areas in Agwa, but it is in Oguta town and Ezi-Orsu that operation and production is going on. Oguta town and Ezi-Orsu is therefore of purpose chosen for this study. This is because they experience firsthand, the social and cultural changes

$$n = \frac{N}{I} + Ne^{2} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

operations of oil producing communities. Cluster sampling was applied since the research reflects ethnic or geographical representations in the population of the

study (Nnamdi, 2005). The sample was arrived at using the Yamane method as follows: Where;
n = desired sample size
N = Population Size
I = Theoretical constant
E = Minimum acceptable margin of error (0.05%)
Based on this method, a sample size, of 395 people was taken. The questionnaires were administered in 4:1 ratio according to the difference in population sizes between Oguta and Ezi-Orsu. This resulted in a total of 316 questionnaires and 79 questionnaires being distributed in Oguta and Ezi-Orsu respectively out of which total of 245 and 71 valid responses were equally respectively returned. This then shows that the total sample size eventually used for the study was 316.
Data analysis was done using descriptive statistics as mean, percentage and frequencies deducted from Linkert scaling method of four-point scale. The four-point Linkert scales are as follows 4 = Strongly Agreed, 3 = Agreed, 2 = Strongly Disagreed, 1 = Disagreed. This gives a mean of 2.5. Factors with a mean score equal to or above 2.5 are regarded as a major socio-cultural challenge of oil exploitation in the communities studied. Inferential statistics used are as follows Z-test, and Chi-Square (x^2), Z-test is

$$Z = \frac{\bar{D}}{\frac{SD}{\sqrt{n}}} \dots\dots\dots\dots\dots\dots\dots\dots\dots (2)$$

Where Z = test statistics
$\bar{D}$ = mean
SD = standard deviation
n = sample size
X2 is stated as follows:

$$x^2 = \sum (0 - \frac{E}{E})^2 \quad \text{----------(3)}$$

Where:
x^2 = chi-square
O = Observed Frequency
E = Expected Frequency
All analysis of data was done using SPSS (Statistical Package for Social Sciences) software.

RESULTS AND DISCUSSIONS

Socio- economic Characteristics of Respondents

Age of respondents

The distribution of the respondents according to age is presented in the table 1 below:

Table 1: Distribution of the respondents according to age

Age	Frequency	Percentage
31-40	39	12.3
41-50	60	19.6
51-60	141	44.6
61-70	74	23.4
Total	316	100

The table above shows that 12.3% of the respondents are in the age bracket of 31-40 years while majority of respondents are in the age bracket 51 – 60 years. Thus the age groups are mature enough to give credible information on socio-cultural challenges being faced.

Distribution of respondents by Level of Education

The distribution of respondents according to their level of education is presented in table 2 below.

Table 2: Distribution of respondents according to level of education

Education	Frequency	Percentage
No formal Education	42	13.3
primary	84	26.6
secondary	131	54.1
tertiary	19	6
Total	316	100

The table 2 above shows that the majority of the respondents (54.1%) had secondary education while 26.6% and 6.8% had primary and tertiary education respectively; about 13.3% had no formal education. This implies that majority of the respondents are educated enough to be conscious of the impact of the petroleum activities on their socio-cultural environment.

Socio-cultural impacts of oil exploitation

The distribution of the respondents according to the level of seriousness of socio-cultural problems associated with oil exploitation is presented in table 3 below.

The results show that among the socio-cultural problems associated with oil exploitation in the area, problems such as impoverishment /poverty (2.40), invasion of traditional customs (2.09), lack of empowerment from oil companies (2.10), lack of proper consultation with community members, prior to development (2.07) are not regarded as serious socio-cultural problems caused by oil exploitation activities in the study area. This is because their mean values are less than the standard mean value of 3.0 which is the judging mean value.

However, other problems such as loss of source of livelihood (4.16) is rated very serious, this is because the community which in time past was largely agrarian society has been deprived of the limited farmlands and water sources for crop cultivation and fishing due to pollution and other inimical practices by oil companies which operate in the area. Another problem rated as serious is

Table 3: Socio-cultural impacts associated with oil exploitation

Socio-cultural problems			**Mean**	**Remark**
Impoverishment/ *poverty*	*758*	*316*	*2.4*	Non-serious
Loss of source of livelihood	*1315*	*316*	*4.16*	Very Serious
Invasion of traditional customs and rites	*660*	*316*	*2.09*	Not Serious
Community clashes and internecine violence	*1270*	*316*	*4.02*	Very serious
Loss of community norms and values	*1062*	*316*	*3.36*	serious
Destruction of historical sites of importance	*1267*	*316*	*4.01*	Very serious
Sexual pervasiveness	*1128*	*316*	*3.57*	serious
Decrease in longevity and infant morality	*1213*	*316*	*3.84*	serious
No empowerment from oil companies	*664*	*316*	*2.1*	Not serious
Lack of consultation with community members before development	*654*	*316*	*2.07*	Not serious
Inequality/inferiority complex	*1258*	*316*	*3.98*	serious
Grand mean ± Std	3.236 ± 1.265			
Percentage of seriousness	64.7%			

community clashes and internecine violence which gave mean value of 4.02 greater than the standard mean value of 3.0, this implies that the presence of oil companies in the area has caused an upsurge in community clashes and violence among host communities which may have been caused by unmet demands by the host communities on the oil companies. This corroborates the assertion by Eregha (2009) that oil exploitation activities in the Niger-Delta is closely associated with such cultural problems as conflict, youth restiveness, hostage taking and kidnapping. Loss of community norms and values showed a mean value of 3.36 and is greater than the standard mean value of 3.0, thus is denoted as a serious problem. This is indicative that the influx of non-indigenous oil workers and to some extent associated materialism has caused to a large extent degradation of traditional community norms and values.

Closely associated with oil exploration and mining activities is bush clearing and burning. The survey indicates that the destruction of historical sites of importance is a major socio-cultural problem to the people of Oguta. The problem obtained a mean score of 4.01. This activity has the potential to adversely affect the psychology of the people in the area and may result in hostile attitude towards the perceived source of the destruction. Sexual pervasiveness and decrease in longevity and infant gave mean score of 3.57 and 3.84 respectively and thus were designated as serious socio-cultural problems in the area. The increase in promiscuity may be associated with materialism which is associated with migration of oil workers and groups into the area. Eregha (2009) also states that sexual promiscuity is closely associated with high outbreak of HIV/AIDs epidemic which is a major problem associated with oil exploitation in the Niger Delta region as a whole. Decrease in longevity and infant mortality proves to be a problem with the community even with perceived global improvement in health care facilities, this may be associated with air and water borne diseases associated with air and water pollution. This further corroborates the work of Obasi (2007) who states that the sparse population patterns which are observed in the area are due to emission of poisonous gases such as sulphur dioxide and carbon monoxide which has caused among other things increase in cataracts, skin rashes and miscarriages among pregnant mothers. Also, the incidence of bronchitis is closely associated with gas flaring activities. Inferiority complex among indigenes gave a mean score of 3.98. This may be a result of some other socio-cultural problems discussed, such as destruction of their historical sites of importance, loss of means of livelihood and tendency of majority of indigenes in the employment of the oil companies to be employed in lower cadre and thus perform more menial jobs than other groups.

The grand mean of the distribution is 3.236±1.265. This gave a percentage of seriousness of 64.72%. This implies that about 64.72% seriousness of the socio-cultural problems are caused by oil exploitation activities in the area.

Effects of socio-cultural problems on the lives of people in Oguta

The distribution of respondents according to the effects of the socio-cultural problems on the lives of the people is presented in table 4 below.

Table 4: Effects of socio-economic problems on the lives of people in Oguta

Effect			**Mean**	**Remark**
The standard of living now is better than it was 20 years ago	*822*	*316*	*2.6*	Agreed
The activities of oil companies has not caused indigenes to abandon their ancestral occupations (Fishing/Farming)	*727*	*316*	*2.3*	Disagreed
The activities of oil companies have not caused the community members to be displaced, to migrate from their ancestral lands.	*676*	*316*	*2.14*	Disagreed
Our children will be able to enjoy the benefits of development brought by oil companies.	*799*	*316*	*3.53*	Agreed
The jobs which can be performed by the community members are awarded to them by the oil companies.	*916*	*316*	*2.9*	Agreed
The oil companies have provided adequate compensation packages and socio-economic empowerment to our community	*635*	*316*	*2.01*	Disagreed
Youths still speak ethnic language well and often	*705*	*316*	*2.23*	Disagreed
Community traditions, culture music and arts are still practiced as in the last 20 years	*645*	*316*	*2.04*	Disagreed
There is still regard for ancestral and traditional leadership institution	*866*	*316*	*3.14*	Agreed
Grand mean			*2.388*	
Percentage of effect			*60.0%*	

The observation shows that out of the nine variables considered as the effects of social-cultural problems on the lives of the people in the study area five variables were rated disagreed and four rated agreed. The result shows that in questions targeting the effects of socio-cultural problems on the culture heritage of the community there is an 80% level of agreement that the socio-cultural problems has adversely affected their cultural heritage. Abandonment of ancestral occupation such as fishing and farming with a mean score of 2.3, displacement and migration from ancestral land with a mean score of 2.14, practice of traditional music/arts/religion with a mean score of 2.04 and speaking of ancestral dialect by youths with a score of 2.23 were all observed as disagreed because they fall below the mean score of 2.5. This policy by the oil companies

may not be unassociated with the observed increase in youth restiveness and communal clashes. In questions aimed at addressing other issues such as poverty and consultation/empowerment; the results indicate a favorable policy by the oil companies towards addressing such effects. Increase in the standard of the living with a mean score of 2.60, children enjoying benefits of the development brought about by oil companies (inter-generational equity) with a mean score of 2.53 and the awarding of jobs which can be performed by indigenes to them (empowerment) with a mean score of 2.90 all exceed the standard mean value of 2.5 and indicate favorable policies of the oil companies in addressing those issues. The result also indicates that there are still values for traditional leadership institution. This gives a mean value 2.74. The grand mean of the distribution is 2.388 and this further gave the percentage effect of the socio-cultural problems as 60.0%. This implies that 60.0% of the effects of socio-cultural problems are caused by oil exploration and exploitation. Empowerment, provision of adequate compensation packages ranked a mean score of 2.01 which is disagreed.

Adaptive responses of the communities to socio-cultural challenges caused by oil exploitation

The adaptive responses of the community members to socio- cultural problems caused by oil exploitation are presented in table 5.

Table 5: Distribution of respondents

Adaptive Response	**Frequency	Percentage
Education	94	29.7
Trading	211	66.8
Artisanship	104	32.9
Traditional family skills	96	30.4
Job creation	179	56.6
Modern farming	182	57.6
equipment/ methods	147	46.5
Grand mean	14.7	
Percentage	45.8%	

**multiple responses recorded

The result shows that most of the respondents (66.8%) indicated trading as their major adaptive means; this implies that they engage in the building and selling of goods to fend for their families. 29.7% of respondents indicated education as their adaptive response, the essence of this is to further empower themselves by seeking higher qualifications to better their lot in life. Again 30.4% of respondents practice their own conservative traditional family skills, 56.6% of respondents indicate job creation as their adaptive response. This might indicate a strong entrepreneurial trend among the community members and may involve to some extent an overlap with trading observed above. About 57.6% and 46.5% indicated the use of modern farming equipments/methods and subsistence farming respectively as their adaptive responses; this indicates that in spite of the water and land pollution these respondents still practice agriculture using modern technologies such as improved seedlings and fertilizers to boost their output.

The grand mean of the distribution is 144.7 and his gives the percentage adaptive response of 45.8%, this indicates that approximately 46% of the respondents adopted various adaptive means for survival.

Inferential statistical Analysis

The following hypothesis were tested

Hypothesis 1

Null hypothesis H_0: the socio-cultural problems caused by oil exploitation in Oguta are not significance

Alternate Hypothesis H_1: the socio-cultural problems caused by oil

exploitation in Oguta are significant.

$$z = \frac{\bar{D}}{\frac{SD}{\sqrt{n}}}$$

Using the z test:
Z calculated: 3,317
Z0.0 5 tabulated value: 1.980

Decision
Z calculated >z0.05 tabulated, H0, is rejected and H1,1 is accepted. This indicates that the socio-cultural problems caused by oil exploitation in Oguta are statistically significant.

Hypothesis 11
Null Hypothesis H0, 2: The socio-cultural problems caused by oil exploitation have not significantly affected the lives of people in Oguta negatively.
Alternate Hypothesis H1, 2: The socio-cultural problem caused by oil exploitation has significantly affected the lives of people in Oguta negatively.
Using chi-square:

$$X^2 = \sum \left(0 - \frac{E}{E}\right) 2$$

X^2 calculated value: 106.88
$X^2$0.05 tabulated value: 55.76

Decision
X^2 calculated > X^2 0·05 tabulated H0, 2 is rejected and H1,2 is accepted. This indicates that the socio-cultural problems caused by oil exploitation have significantly affected the lives of people in Oguta negatively. The results of inferential statistical analysis corroborates the results from descriptive statistics which shows that oil exploitation has adversely affected the socio-cultural standards, norms, and values of the people and this has equally significantly affected their lives negatively. This also runs in tandem with Eze (2015) that petroleum activities impact negatively on the social/cultural and economic environment of the oil producing communities.

CONCLUSION
This study has given an insight into the socio-cultural problems which are facing Oguta community in the face of oil exploration and exploitation activities; it has also given insight into the adaptive responses of the people to the socio-cultural problems encountered due to the environmental degrading activities of oil companies. The policies of oil companies operating in Oguta have addressed to a reasonable extent empowerment of a community; they have contributed to improving the general standard of living of the community members as well as put some development structures in place which community members acknowledge will be able to improve the lives of their children and future generations of Oguta people. Though commendable to some extent, the policies of oil companies have not addressed the forced migration of people out of their ancestral land due to pollution of land and water which has historically been the source of livelihood of Oguta people; also the policy of the oil companies has not addressed such issues as preserving the traditions, customs, norms, values, and language of the people. The result is that there is an erosion of the cultural values of the community which are tied to their environment. One therefore recommends that the oil companies need to research into means to restore as much as possible the traditions of the people as well as explore ways to preserve those which are still standing. On a larger scale the present project level EIA required by the federal ministry of Environment needs to be upgraded to strategic Environmental Assessment for the oil sector as a whole to provide a holistic approach for addressing socio-cultural issues in larger policies and plans to achieve the goals of sustainable development.

REFRENCES

Alabi O.F and Ntukekpo S.S (2012): Oil companies and corporate socio Responsibility in Nigeria: an empirical Assessment of Chevrons community Development projects in the Niger Delta". British Journal of Arts and social science 4(2)

Birdstall .N. and Subramanin A. (2004): "Saving Irag from Soil", Foreign Affairs, 83, 77-89

Emmanuel O (2004); "Gauging progress on oil in Nigeria: community relations development impact and revenue transparency "www. emalinsight com/10.1108

Eregha P.B and Irughe L.R. (2009): "Oil induced Environmental Degradation in the Nigeria's Niger Delta; the multiplier Effects "Journal of Sustainable Development in Africa. 11(4)

Eze B.U & Osheyen S.O (2015): the impact of petroleum Activities on the socio-Economic life of resident population of Uvwie Local Government Area of Delta State Nigeria". Middle- east Journal of Scientific research 23 (7)138-1320

George Y. (2006): "Pumping oil and pumping money: impact on Local cultures in Niger Delta Region of Nigeria". www.emalinsight com/10.1108

Nnamdi, A (2005): Research Methodology in Behavioural science Lagos: Long Man Nigeria PLC.

Obasi M.N (2007)" Environmental Education and issues in oil Exploitation – A case study of Oguta L.G.A of Imo State" The social science 2(4) 381-384.

Orubu C.O, Odusola A, and Ewharieme W. (2004);" the Nigerian Oil Industry, Environmental Diseconomies, Management Strategies and need for community involvement" Joumal ot Human Ecology; 16 (3): 203-214

United Nations Development Report (UNDP) (2006): Niger Delta Development: Human Report; United Nations Population Fund (UNFPA).