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IMPACT OF OIL EXPLORATION ON FISHERFOLKS' LIVELIHOOD AND SAFETY OF FISHERIES INDUSTRY IN NIGERIA

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ABSTRACT

There have been many outcries in the Nigerian media on the various environmental degradation of the vast water space in the Niger Delta area of Nigeria by oil explorers. About 70% of the Nigerian populace lives in the coastal areas where the occupation is predominantly fishing and farming. For most of the publications, the extents of impact on the fishing industry are not addressed in order for solutions to be given. Production from the fisheries sector has dropped astronomically thereby earning the country a deficit due to importation of frozen fish to the country. In this study, a survey of three states (Bayelsa, Rivers and Delta) in the Niger Delta area of Nigeria was done. The communities studied include Ogulagha, Okobelema and Okpoama. Personal interviews with fishermen and primary data on the sector's contribution to fish production and GDP were also carried out. The study aimed at finding out the sources and nature of degradation and the impacts such have on the fishing industry and the socio-economics of the fishermen. The study revealed that there are no significant difference in the negative impacts of environmental degradation caused by the activities of the oil companies on the socio-economics of the

fishermen (($F_{2,27}=0.59$, $P>0.05$)) The difference is not significant and the hypothesis is therefore accepted. The major impact on fishing was depletion in catches and low income earnings by fishermen with a resultant poor quality of living and livelihood. Oil spills, foreign vessels incursions and bunkering, vandalization of pipelines were identified sources of depletion in fish catches from the wild. The personal interviews and Focus Group Discussion (FGDs) showed that most heads of communities rely on the remuneration they get from the companies and refused to mobilize the fishermen for joint action against the oil companies. Mitigation measures usually carried out by the oil companies do not actually replenish the destroyed mangroves where breeding of fishes take place. The communities need the Government to institute high level surveillance of the high seas and monitor the activities of oil explorers as well as education of the communities on the effects of bunkering near shoreline.

INTRODUCTION

Oil companies in Nigeria are under federal jurisdiction and it is both a partner in all oil activities through the NNPC and it is required by law to enforce environmental compliance of oil operations through the Department of Petroleum Resources. Under the Petroleum Act, the Minister of Mines, Power and Steel established pollution regulations for water bodies, calling for precautionary measures and proper maintenance of drilling and mining equipment. Despite all these regulations, the Larger Marine Ecosystem and the Estuaries in the Niger Delta continued to be contaminated thereby affecting the safety of living resources, especially

fisheries and the livelihood of fisher folks in the communities.

This paper is aimed at:

- (i) Identifying the sources of oil pollution in the Niger Delta.
- (ii) Impact on the fisheries, wildlife and recreation
- (iii) Remediation of impacted areas and compensations to fisher folks
- (iv) Recommendation of an Integrated Coastal Zone Management Strategy using IEC.

MATERIALS AND METHODS

Historical records, survey and testimonials were used for this study. Questionnaires were distributed to 105 fishermen but only 98 were properly filled. Data was analysed using simple percentages and ANOVA to test for differences in the impacts on the fishermen from the three communities that were sampled.

RESULTS AND DISCUSSIONS

Identified Source of pollution in the Niger Delta

Results from historical records indicated major sources of pollution widespread ecological disturbances, including explosions from seismic surveys, pollutions from pipeline leaks, blow-outs, drilling fluids and refinery effluents (<http://www.america.edu/ted/ice.htm>).

There is also discharge of ballast water into the system, dumping of wastes from vessels, discharge of produced water or drilling mud from onshore facilities into surface water (UNEP, 1984). Gas flaring is another source of pollution of the communities studied.

Environmental watch- groups have established that Oil wastes that enter the ocean come from many sources, some being accidental spills or leaks, and some being the results of chronic and careless habits in the use of oil and oil products. Most waste oil in the ocean consists of oily storm water drainage from cities and farms, untreated waste disposal from factories and industrial facilities, and

unregulated recreational boating. It is estimated that approximately 706 million gallons of waste oil enter the ocean every year.. Offshore drilling and production operations and spills or leaks from ships or tankers typically contribute less than 8 percent of the total. The remainder comes from routine maintenance of ships (nearly 20 percent), hydrocarbon particles from onshore air pollution (about 13 percent), and natural seepage from the seafloor (over 8 percent).

Impacts on Fisheries, Wildlife and Recreation

There had been many media reports on the damage caused by irresponsible oil exploration to the economy and peoples of Nigeria. The major impact on fishing was depletion in catches and low income earnings by fishermen with a resultant poor quality of living and livelihood. Oil spills, foreign vessels incursions and bunkering, vandalization of pipelines were identified sources of depletion in fish catches from the wild. The concern of this paper is mainly on the fisheries of the communities. This study focused on ten major causes which were subjected to test through a questionnaire. The 98 fishermen were required to indicate which of the identified impacts related to their own communities. Table 1 shows that over (70%) of all respondents in the three communities indicated that oil exploration and related activities in their communities have negatively impacted on mangroves which are breeding ground for fishes during the rainy season. This invariably resulted in all respondents (100%) indicating that there was reduction in fish caught in their communities. Fish species extinction is the situation where some types of fish have either migrated or are no more caught in the environment because of adverse environmental conditions. Other impacts include loss of lives to acts of pirates, food shortage, loss of birds and marine mammals. Recreational activities are also affected as tar balls deface the

serene environment of the beaches. ANOVA result showed that there is no significant difference in the respondents perceptions of the negative impacts of oil explorations and related environmental pollution on the livelihood ($F_{2,27}=0.59$, $P>0.05$). This general consensus of the communities on the negative impacts of their fisheries livelihood source must be addressed as a matter of urgency through an Integrated Coastal Zone Management which will involve the active participation of the communities in addressing the identified issues listed above.

Remediation of Impacted Areas and Compensations to Fisher Folks

The study also looked at documents to review how impacted environments are remediated and affected fisher folks are compensated when a community is affected. Interviews with fishermen in Ogulagha gave examples of clean-up activities of some oil companies in the Forcados terminal. Both mechanical and manual clean-ups are carried out. Most times they engage the services of the community members. As a measure of compensation, financial and fishing gears and motorized fishing boats are given to fishermen. However, the general complaint was that the gear sizes were not appropriate because the mesh sizes are too wide. There is the other aspect that some community leaders collect compensations from the oil companies but do not share with members of the communities.

Recommendation of an Integrated Coastal Zone Management Strategy Using Information, Education and Communication (IEC)

An important realization that it is becoming increasingly difficult to manage any one particular coastal natural resources without a comprehensive integrated framework for policy planning and management has called for an IEC strategy. This involves developing a sound institutional framework, focusing on

participatory environmental planning and management with all stakeholders by holding regular workshops for review and identifying areas of improvement in exploration of the resources in the community. The key principles of integrated coastal zone management by the Environment Department (1993), involve a holistic multisectoral perspective which recognizes the interconnections between coastal systems and uses. ICZM among others emphasized participation and ownership of the process and strategy by all stakeholders; which implies a mechanism for reducing and resolving resources conflicts and equitably distributing benefits to stakeholders.

RECOMMENDATIONS AND CONCLUSION

The media should be used extensively through drama, storytelling, exhibitions, tradefares, publications, Newsletters, poster sessions, video-conferencing, phone-in programmes and community radio and television systems to educate, enlighten and entertain the community members about the activities of the oil companies. The oil companies can use media experts to reach out to the women and youths by identifying developmental programmes to will improve the socio-economic livelihood of the people through diversification and integration of alternative income earnings through fish farming in cages, concrete tanks and plastics. In this way, community members will appreciate the fact that the oil companies have their welfare in mind.

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Table 1: Fishermen's responses to identified impacts of oil explorations on their socio-economic livelihoods

S/N	Impact points	Ogulagha (35)		Okpoama (31)		Okobelema (32)		Total	
		Yes	No	Yes	no	Yes	no	Yes	No
1	Destruction of mangroves	25 (71.4)	10 (28.6)	29 (93.5)	2 (6.5)	32 (100)	0 (0)	86 (87.76)	12 (12.24)
2	Reduced fish catches	35 (100)	0 (0)	31 (100)	0 (0)	32 (100)	0 (0)	98	0 (0)
3	Extinction of fish species	28 (80)	7 (20)	31 (100)	0 (0)	22 (68.8)	10 (31.2)	81	17 (17.35)
4	Loss of fertile land for farming	27 (77.1)	8 (22.9)	30 (96.8)	1 (3.2)	30 (93.8)	2 (6.3)	87	11
5	Polluted drinking water	23 (65.7)	12 (34.3)	21 (67.7)	10 (32.3)	23 (71.9)	9 (28.1)	67	31
6	Loss of lives to pirates	8 (22.9)	27 (77.1)	10 (32.3)	21 (67.7)	22 (68.8)	10 (31.2)	40	58
7	Noise	30 (85.7)	5 (14.3)	26 (83.9)	5 (16)	19 (59.4)	13 (40.6)	75	23
8	Food shortage	24 (68.6)	11 (31.4)	22 (71)	9 (29)	25 (78.1)	7 (21.8)	71	27
9	Loss of birds and other mammals	29 (82.9)	6 (17.1)	29 (93.5)	2 (6.5)	19 (59.4)	13 (40.6)	77	21
10	Loss of recreational beaches	31 (88.6)	4 (11.4)	22 (71)	9 (29)	22 (68.8)	10 (31.2)	75	23
	Total	260 (74.3%)	90 (25.7%)	251 (80.97%)	59 (19.03%)	246 (76.9%)	74 (23.1%)	757 (77.24%)	223 (22.76%)