

# ENVIRONMENTAL ANALAR

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## ENVIRONMENTAL ANALAR

### PROPERTY RIGHT AND THE NIGER DELTA CRISIS: AN ASSESSMENT OF THE IMPACT OF OIL EXPLORATION AND PRODUCTION ON THE ENVIRONMENT

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#### ABSTRACT

*This paper has assessed the Niger Delta Crisis in the light of the impact of oil production on the environment as it is related to the call for a review of the existing property right regime. Survey reports show that if the federal government would make the Nigeria Delta a priority in its developmental programs, in addition with a pursuit of visionary environmental development/compensation policies, the call for communal management of resources would no longer be popular. This, the paper believes, would bring about a resolution of the crisis, thus engendering the stability and cohesiveness required for the development of the nation. Otherwise, the nation may suffer disintegration or excessive loss of lives and retardation.*

#### 1. INTRODUCTION

Economic development is the overall improvement in the general standard of living of the people, which involves the proper channeling of the prospects of economic growth such that the welfare of the people are generally improved upon. But economic growth is

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the rise in output, which reveals the productive state of the economy. When the economy is productive, output is expected to be on the increase. A downward trend in output is an indication that the economy is not as productive. We can then say that without growth there is no development. So the discovery of oil in Nigeria should have enhanced and improve the productive base of the economy. But this goal is yet to be fully realized, given the fact that as a result of oil production, the Niger Delta (see figure 1 for map of the region) has been suffering severe environmental degradation, which is yet to be adequately addressed for the region to move forward. Some of the problems include destruction of farmland and crop yields due to the impact of oil spills and gas flare on the environment. These would not have been so if the property right regime did not concede all land to the federal government.

Therefore, the oil prospecting and producing companies are not keen about the protection of the environment, since they are not responsible to the communities but to the federal government. The federal government is mainly interested in the revenue from the Nigeria Delta rather than the welfare of the people who are the natural owners of the resources. Hence the people take to violence as a way of pressing for their rights. This is the background of the Nigeria Delta crisis, the wanton destruction of properties and lives, which are neither socially, politically or economically healthy for the nation.

This paper therefore examines the property right regimes in Nigeria. It also takes a critical look at the operation of the oil companies in the Niger Delta and their role in causing environmental problems. Their effort in the promotion of development in the host communities of the Niger Delta are also assessed. The paper examines the potential effects of change of the property regime with respect to the future of the Delta region.

#### 2.0 PROPERTY, PROPERTY RIGHTS AND MANAGEMENT REGIMES

Property connotes natural endowment of resources from which economic production is carried out. It could be regarded as belonging



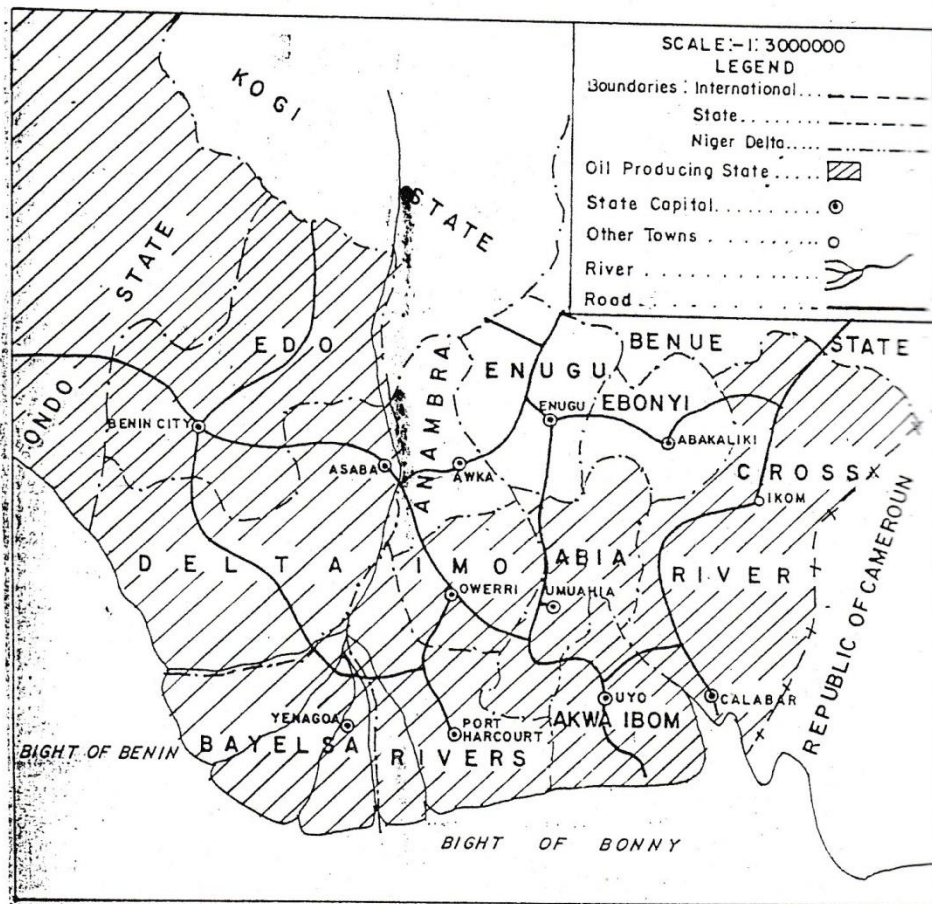


Fig. 1. Niger Delta Showing Oil Producing States

to a common pool base or a non-common pool base. In this study, a common pool resource is the type of resource which everyone within a geographical enclave (to which it refers) have a kind of claim, the magnitude of each persons claim depending on the extent of his utilization of such a resources. An example of this type of resource includes communal property and open access (see fig. 2). On the other hand, a non-common pool resource is the type of resource to which claim is restricted. Examples of non-common pool resources are identified with private property and state property. That is, the ownership of resource base resides either strictly in the hands of private individuals or the state. From this viewpoint, four different types of property may be identified thus: private property, state property, communal property, and open access (Eggertsson 1993). Also, as shown from figure 2, the various management regimes result from the different types of property rights. Therefore the type of resource base determines the property rights, while the type of property rights determine the management regimes.

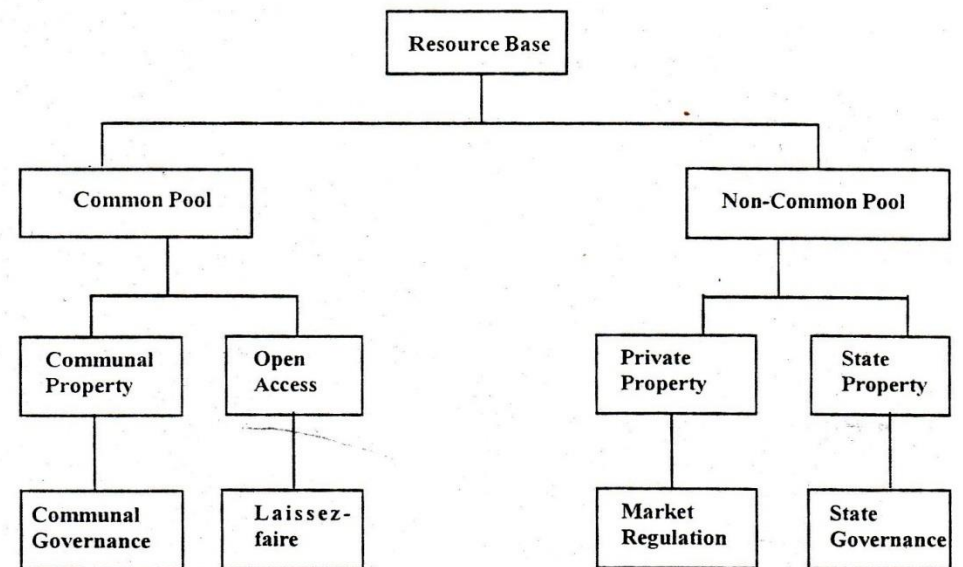


Fig. 2. Properties Chart



## 2.1 Types of Property

Private property can be defined as the control of assets by private individuals, which implies possessing the right of exclusivity and transferability (see Eggertsson 1993). By this, a property is private when the right of ownership is vested in individuals as a result of which the individual owners have the exclusive right of usage or transfer of ownership either by outright sale or by lease, or by any other means by which transfer could be effected (see Regier and Grima 1985). On the other hand, a common property can be defined as the control of resources/assets by a community of actors who jointly have claims on the utilization of the resources base. The community of actors decides from time to time who uses the resources and who does not.

When a resource is owned by the State, only the government has the exclusive right on the utilization of such a resource. If the government does not delegate right of administration to anybody, no individual organization can exercise any right on the asset. In other words, the right of exclusivity and transferability resides only in the government.

Open access refers to a situation where there is no control or restriction placed on the usage or claim to a resource base. In this case, anybody can make use of a resource without hindrance. Here no permission is obtained from anyone such as individual, community, or the state.

## 2.2 Management Regimes

Having discussed the different types of Resource base and the emanating property rights it is pertinent to examine the ensuing management regimes as reflected in Fig. 2.

Market regulation is relevant to private property rights. Since the ownership of the properties resides in private individuals, right is transferable from one person to the other through the institution of market. therefore, the forces of demand and supply determine the price of transfer. For example land in heavy commercial locations

attracts higher price/rent unlike those in farm settlements, which usually attracts lower price/rent. One disadvantage of this regime is that the rich class tends to command ownership of land resources, thus subjecting the less-rich class to servitude and oppression. This further hinders the pace of development.

Communal governance will emerge where property is owned communally. It plays an important role where the interests of the people and sustainability of their resource base are not well served by the government and where privatization is not feasible or politically acceptable (McCay 1993). Communal governance is capable of serving the purpose of widespread development where virtually everybody belonging to the community has input in the management of their resource base. Every member of the community forms the decision making body, or a body may be elected, which will not allow selfish/personal interests to replace the communal interest. Electing a body to represent the community can take the form of dividing the community into strata/clusters, which elect representatives into the central body that makes decision on behalf of the community. On the other hand if, the decision making body is hijacked by a few elite, the success of common property governance would be hindered (see Rodman 1989; Vondal 1987; McKean 1992; and Hackett 1992).

Where property right resides in the state, the government is responsible for its management. In this case, the right of exclusivity and transferability strictly resides in the government. State governance could be anti-development in multi-racial state where the class/race in power does not favor certain section of the country irrespective of the magnitude of possession of natural assets in their domain.

In some cases, there may be basically no governance or any kind of regulation on the use of resources. This is the situation with open access where anybody can make use of available resources without necessarily having to obtain permission from any authority. The disadvantage is that users may only be interested in the resource usage and not its replenishment, thus subjecting the resource base to the danger of extinction.



### 3.0 NIGERIA'S PROPERTY RIGHT EXPERIENCE

Property right regime in Nigeria can be viewed in terms of the pre-1978 situation and the post-1978 position. Before the enactment of the Land Use Decree of 1978, which was incorporated into the new constitution in 1979, land ownership was based on the communal land tenure system in which land is held not by individuals but by family, village or clan or even by the traditional rulers who acts as trustees for the group under his authority (Udo 1990).

But with the era of rising money consciousness and property acquisition by the society, individual's title to land increased. Individuals started to purchase land both from families and communities, thus changing the status quo. With this development, a few private owners (landlords) emerged with titles to land. The aftermath was a restriction in access to land both for government and private sector projects. Projects were hampered, as the landlords were not always ready to relinquish their titles, even when the land was not being used. Consequently the government has to set up a panel to examine the land use right. The panel came up with the recommendation that there was need for a pragmatic change in the status quo, for the economy to move forward. Therefore, the Land Use Decree of 1978 was enacted with the provision that all land in the territory of each state of the federation of Nigeria be vested in the Governor of that State. In terms of control, management, and use of the land, the following provisions were made:

- (i) That all land in urban areas shall be under the control and management of the Military Governor.
- (ii) That all other land shall be under the control and management of the Local Government of the area in which the land is situated.
- (iii) That, individuals have usufructuary, not absolute rights in land, and that the head of the family or the head of government (Oba, Chief, or Emir) is the trustee of land in his area of authority.

The following restrictions were however imposed on local government right to land acquisition:

- (a) No local government may apply the powers of acquisition to land within an area declared to be an urban area.
- (b) No local government may apply the powers of acquisition to land that is the subject of a statutory right of occupancy.
- (c) No local government may apply the powers of acquisition to land already compulsorily acquired by the Federal or State Government.
- (d) No local government may apply the powers of acquisition to land that is the subject of any law relating to minerals and mineral oils.

The implication from above is that the Federal/State Governments have utmost control of land and land resources. The crisis the nation is facing in the Niger Delta has been linked to this.

### 4 PROPERTY RIGHTS IN THE NIGER DELTA

The Niger Delta is currently made up of nine states: Akwa Ibom State, Rivers state, Bayelsa State, Delta State, Edo State, Ondo State, Cross River State, Abia State and Imo State. The Niger Delta States form the wealth base of the nation because of their endowment with oil mineral resources, from which the nation generates most of its income, as shown in Table 1. Oil revenue constitutes a bulk of the total accruing to Nigeria with effect from 1972. This is reflected in the ratio of oil revenue to total revenue. For instance, the ratio, which was 26.3% in 1970 rose to 782.1% in 1974. From 1975, although there are some fluctuations, the ratio averaged between 70 and 80 percent, with the highest ratio of 86.2% recorded in 1992.

Although the discovery of oil has been a boost to the revenue base of the nation, there exists the bad side of oil production, which is the degradation of the environment. As a result, the people living within the production area and who depend on the land for their economic well-being are adversely affected. However, if properly compensated, and if the producing companies minimize the impact of production on the environment, the adverse effect on life would be greatly reduced.



Table 1: Nigeria's Total Revenue Summary and the Ratio of Oil Revenue

Year	Total Revenue	Oil Revenue	Non-oil Revenue	Ratio of oil Revenue to Total Revenue
1970	634.0	166.6	467.4	26.3
1971	1,168.8	510.1	658.7	43.6
1972	1,405.1	764.3	640.8	54.4
1973	1,695.3	1,016.0	679.3	59.9
1974	4,537.4	3,724.0	813.4	82.1
1975	5,514.7	4,271.5	1,243.2	77.5
1976	6,765.9	5,365.2	1,400.7	79.3
1977	8,042.4	6,080.6	1,961.8	75.6
1978	7,371.0	4,555.8	2,815.2	61.8
1979	10,912.4	8,880.8	2,031.6	81.4
1980	15,233.5	12,353.3	2,880.2	81.1
1981	13,290.5	8,564.4	4,726.1	64.4
1982	11,433.7	7,814.9	3,618.8	68.3
1983	10,508.7	7,253.0	3,255.7	69.0
1984	11,253.3	8,269.2	2,984.1	73.5
1985	15,050.4	10,923.7	4,126.7	72.6
1986	12,595.8	8,107.3	4,488.5	64.4
1987	25,380.6	19,027.0	6,353.6	75.0
1988	27,596.7	19,831.7	7,765.0	71.9
1989	53,870.4	39,130.5	14,739.9	72.6
1990	98,102.4	71,887.1	26,215.3	73.3
1991	100,991.6	82,666.4	18,325.2	81.9
1992	190,453.2	164,078.1	26,375.1	86.2
1993	192,769.4	162,102.4	30,667.0	84.1
1994	201,910.8	160,192.4	41,718.4	79.3
1995	459,987.3	324,547.6	135,439.7	70.6
1996	520,190.0	369,190.0	151,000.0	71.0
1997	582,811.1	416,811.1	166,000.0	71.5
1998	463,608.8	289,532.3	174,076.5	62.5

Sources: (i) Federal Ministry of Finance and Economic Development  
(ii) Central Bank of Nigeria, Annual Report and Statement of accounts (various issues)

In the Niger Delta, much is yet to be done both in terms of compensating the people and minimizing the impact of production on the environment. This and the overall underdevelopment of the Niger Delta has led to the crisis and conflicts in the area. The crisis have led to the emergence of youth activist movements such as Ogoni Youth Movement (OYM), and Ijaw Youth Congress (IYC) among others within the Niger Delta, which seek to change the status quo. The Ogoni Youth Movement enacted the Ogoni Bill of Rights in 1990 with the following points among the 20 points listed in the bill:

- (i) That in over 30 years of oil mining, the Ogoni nationality have provided the Nigerian nation with a total revenue estimated at over 40 billion naira (N40 billion) or 30 billion dollars.
- (ii) That in return for the above contribution, the Ogoni people have received NOTHING.
- (iii) That the search for oil has caused severe land and food shortages in Ogoni – one of the most densely populated areas in Africa (average 1500 per square mile; national average: 300 per square mile).
- (iv) That neglectful environmental pollution laws and sub-standard inspection techniques of the federal authorities have led to the complete degradation of the Ogoni environment, turning our homeland into an ecological disaster.
- (v) That the Ogoni people lack education, health and other social facilities.
- (vi) That it is intolerable that one of the richest areas of Nigeria should wallow in abject poverty and destitution.
- (vii) That successive federal administration has trampled on every minority right enshrined in the Nigerian constitution to the detrimental of the Ogoni and has by administrative structuring and other noxious acts transferred Ogoni wealth exclusively to other parts of the republic.
- (viii) That the Ogoni people wish to manage their own affairs.

Also, the various Ijaw Youth Organizations under the Ijaw Youth Congress (IYC) issued the Kaiama Declaration (CRP, 1999), which include the following points, among others:

- (a) That it was through British colonization that the Ijaw nation was forcibly put under the Nigerian State.
- (b) That the political crisis in Nigeria was about the struggle for the control of mineral resources which account for over 80% of GDP, 95% of national budget and 90% of foreign exchange earnings, out of which 65%, 75% and 70% were derived from the land of the Ijaw.



- (c) That despite these huge contributions, our reward from the Nigerian State remains avoidable deaths resulting from ecological devastation and military oppression.
- (d) That all land and natural resources (including mineral resources) within the Ijaw territory belong to the Ijaw communities and are the basis of our survival.
- (e) That we cease to recognize all undemocratic decrees that rob our people/communities of the right to ownership and control of our lives and resources, which were enacted without our participation and consent. These include the Land Use Decree and the Petroleum Decree etc.

The aftermath of the Ijaw youth declaration was the issuance of an ultimatum by the Ijaws to all oil companies operating in Ijaw areas to vacate their land. This was a prelude to the determination of the issue of resource ownership and control through the instrument of a sovereign national conference, where the various ethnic nationalities that make up Nigeria would decide how to relate with one another in a genuinely constituted federal republic. The Ijaw youths and the Ogoni Bill emphasize approximately the same issue. The points reveal the claim of the Niger Delta people to ownership of petroleum oil located in the Delta area.

## 5. OIL PRODUCTION, ENVIRONMENTAL DEGRADATION AND PROPERTY RIGHT REVIEW

The negative impacts of oil production on the environment, as pointed out earlier are mainly caused by oil spills and gas flaring.

### 5.1 Gas Flaring

Emissions from gas flaring are made up of N-oxides (NO<sub>x</sub>), carbon dioxide (CO<sub>2</sub>), volatile organic carbon (VOC), and sulphur (iv) oxides (SO<sub>2</sub>). As reported by NDWC (1995), for estimation of air emissions, 20% of the total outlet of gas is assumed to be present

as volatile organic compound (exclusively as methane). The report presents methane and CO<sub>2</sub> as the main greenhouse gas responsible for global warming, which has probably raised the average global temperature by around 0.5°C within the last century. It also presents N-oxides and SO<sub>2</sub> as some of the main components causing acidification as a consequence of both wet and dry deposition.

Table 2: Associated Gas Production, Utilization and Flaring in Nigeria (million cubic metres)

Year	Production	Utilization	Flaring
1970	8,039	72	7,957
1971	12,975	185	12,790
1972	17,122	274	16,848
1973	21,882	395	21,487
1974	21,170	394	26,776
1975	18,656	323	18,333
1976	21,276	659	20,617
1977	21,924	972	20,952
1978	21,306	1,866	19,440
1979	27,619	1,546	26,073
1980	24,551	1,647	22,904
1981	17,113	2,951	14,162
1982	15,382	3,442	11,940
1983	15,192	3,244	11,948
1984	16,255	3,438	12,817
1985	18,569	3,723	14,846
1986	18,739	4,822	13,917
1987	17,085	4,794	12,291
1988	20,253	5,516	14,737
1989	25,053	6,323	18,730
1990	28,163	6,343	21,820
1991	31,587	7,000	24,588
1992	32,465	7,058	25,406
1993	33,445	7,536	25,908
1994	32,793	6,577	26,216
1995	32,980	6,910	26,070
1996			
1st Quarter	9,554	2,655	6,898
2nd Quarter	9,267	2,576	6,692
3rd Quarter	9,185	2,314	6,871
4th Quarter	8,964	2,605	6,359
1997			
1st Quarter	9,383	2,486	6,897
2nd Quarter	8,796	2,477	6,319

Source: Nigerian National Petroleum Corporation (NNPC) in CBN Statistical Bulletin Vol. 7 No. 2, 1996.



Table 3: Air Emissions from Gas Flaring

Unit	Product Unit/year	Particulates		N-Oxides		VOC		SO <sub>2</sub>		Remarks
		kg/unit	tons/year	kg/unit	tons/year	kg/unit	tons/year	kg/unit	tons/year	
1000m <sup>3</sup>	6.967 million	0.24	1,672	9.6	66,833	546 <sup>21</sup>	3.8 million	1.82	12,679	Shell, Rivers State
1000m <sup>3</sup>	3.826 million	0.24	918	9.6	36,729	546	2.1 million	1.82	6,963	Shell, Delta State
Total Shell	10,250 million		2,590		103,562		5.9 million		19,642	Shell, 40% of produced oil in Nigeria.
Emission tons/km <sup>2</sup>		0.15		5.9			337.0		1.1	35,000km <sup>2</sup> , area of the Delta.

<sup>21</sup>Calculate as: 20% of 1000m<sup>3</sup> methane with a density of 2.73kg/m<sup>3</sup>

Source: Niger Wetland Centre, 1995

Table 2 and Table 3, show the quantity of gas flared in Nigeria and air emission from gas flaring attributed to Shell Petroleum Development Company (SPDC). A greater proportion of the gas produced in Nigeria is flared (rising annually as shown), which increases the danger of the associated effects of gas flaring.

One of the major effects of gas flaring is that it causes acidification, which rapidly corrodes galvanized steel roofs. This is a major problem because most houses are covered with steel roofs. As reported in Table 4, 75% of houses in the Niger Delta are roofed with galvanized steel also about 44.7% of these roofs are changed between 1 and 3 years, while 29.8% are changed between 3 and 5 years. This implies that, on the average, about 74.5% of the Nigeria Delta people change their roofs between 2 and 4 years. Matching this observation with the response on type of roofing material connotes that galvanized steel sheets (Zinc) have a very short life span in the Niger Delta (2-4 years). This is because of the fact that the respondents ratio of 74.5% for the duration of the roofing sheets is approximately equal to the respondent ratio of 75% for those who uses Zinc to build.

A study by Udofia and Ikurekong (1998) on an oil community (Iko) in the Niger Delta region shows that hydrogen sulphide, carbon monoxide and sulphur dioxide were present as the main acid generating gases in the air, thus constituting the major sources of acid deposition in the area (see Table 5a). As a result, when rain or fog reacts, acid are formed and deposited on the environment, with the implication of various adverse effects on the environment, among which is the corrosion of structures such as bridges, buildings and roofs.

Table 4: Survey Report on the Impact of Gas Flare on Roofing Sheets

S/No	Nature of question	Response Guide	Response/Response Ratio			
			Akwa Ibom	Rivers	Bayelsa	Total
1.	Age (Years)	15 – 29	25 (69.4)	47 (66.2)	61 (58.7)	133 (63.0)
		30 – 44	10 (27.8)	11 (15.5)	30 (28.8)	51 (24.2)
		45 – 59	1 (2.8)	5 (7.0)	6 (5.8)	12 (5.7)
		60 and above	-	8 (11.3)	7 (6.7)	15 (7.1)
		Total	36	71	104	211
2.	Educational Background	Primary School	-	11 (15.5)	5 (5.7)	16 (8.2)
		Secondary School	10 (27.8)	18 (25.4)	27 (31.0)	55 (28.4)
		Post-secondary Education	26 (72.2)	37 (52.1)	45 (51.7)	108 (55.7)
		No Education	-	5 (7.0)	10 (11.5)	15 (7.7)
		Total	36	71	87	194
3.	Whether respondent own a house	Yes	18 (51.4)	18 (25.7)	13 (14.9)	49 (25.5)
		No	17 (48.6)	52 (74.3)	74 (85.1)	143 (74.5)
		Total	35	70	87	192
4.	Type of roofing Material	Zinc	10 (50.0)	16 (84.2)	22 (88.0)	48 (75.0)
		Asbestos	8 (40.0)	3 (15.8)	1 (4.0)	12 (18.8)
		Long pan (Aluminium)	2 (10.0)	-	-	2 (3.1)
		Bamboo	-	-	2 (8.0)	2 (3.1)
		Total	20	19	25	64
5.	How often the roof is changed (Years)	1 – 3	2 (11.1)	5 (50.0)	14 (73.7)	21 (44.7)
		3 – 5	11 (61.1)	1 (10.0)	2 (10.5)	14 (29.8)
		5 – 7	3 (16.7)	-	2 (10.5)	5 (10.6)
		7 – 9	2 (11.1)	2 (20.0)	1 (5.3)	5 (10.6)
		9 and above	-	2 (20.0)	-	2 (4.3)
		Total	18	10	19	47
6.	Reason for the changing of roof	Corrosion due to acid rain	8 (57.1)	5 (35.7)	14 (70.0)	27 (56.2)
		Normal life span of sheets	3 (21.4)	4 (28.6)	2 (10.0)	9 (18.8)
		Don't know	3 (21.4)	5 (35.7)	4 (20.0)	12 (25.0)
		Total	14	14	20	48

Table 5a: Concentration of Main Acid Aerosols

Gas	Conc. (mg/L)
Hydrogen sulphide H <sub>2</sub> S	8.64
Carbon monoxide CO	0.50
Sulphur dioxide SO <sub>2</sub>	76.7
Nitrogen (II) Oxide NO <sub>2</sub>	N. D
Air pH at 23°C	10.25

Source: Udofia and Ikurekong (1998)

Although the findings of Udofia and Ikurekong was on a very small unit of the Nigeria Delta and did not link the acidity level of the air to the life span of galvanized roofing sheets, it is no doubt a reflection of the general situation in the Nigeria Delta region. However, measurements linking the life span of galvanized roofing sheets have been conducted elsewhere in the world (see Yocom et al. 1977 as



presented in NDWC, 1995). This is presented in Table 5b. Therefore the findings here, looking at Tables 4, 5a and 5b show that the effects of concentration levels of  $\text{SO}_2$  usually associated with heavy industrial areas is being felt in the Niger Delta.

Table 5b: Acidification and Life Time of Galvanized Sheet Steel

SO <sub>2</sub> -concentration Kg/m <sup>3</sup>	Type of Environment	Observed Lifetime Years
13	Rural	30-35
260	Semi industrial	15-20
1,040	Heavy industrial	3-5

Partly according to: Effect of economic materials and structures. Yocom, T. E et al. In Air Pollution. 3<sup>rd</sup> edition. Academic Press, New York, 1977

The oil companies should consider the alternative to gas flaring in order to help protect the environment from further degradation, following the impact of air emissions from gas flare on the environment.

### 5.3 Oil Spills

Oil spill occurs when oil is released from the pipes conveying the products to their destination. The oil may spread into farmlands (destroying crops) or into rivers (destroying aquatic life), resulting in economic hardship for farmers and fishermen who depend on these resources for sustenance. Oil spill may also constitute health hazard, as people consume the polluted produce. This is a potentially major problem associated with oil production in the Nigeria Delta. Whenever oil spillage occurs, the communities demand for compensation from the responsible oil companies. The compensations, however, are inadequate. Incidence of oil spills could be reduced if the production processes are carefully monitored, checked and controlled.

Report from Shell Petroleum Development Company (SPDC) as presented by NDWC (1995) shows that oil spills may be caused by corrosion of equipment, failure with equipment and sabotage among others (see Table 6). As shown in the Table, the larger proportion of oil spill in 1991, and 1993 was due to corrosion and failure of oil equipment while a larger proportion of the spill in 1992 and 1994 was

Table 6: Oil Spillage, Causes and Volumes for Shell in Delta State, 1991 - 1994.

	1991		1992		1993		1994		TOTAL	
	No.	Volume Barrels	No.	Volume Barrels	No.	Volume Barrels	No.	Volume Barrels	No.	Volume Barrels
Corrosion of oil equipment.	17	266	24	183	26	131	25	124	92	704
Failure with equipment.	22	178	20	126	17	275	15	89	74	668
Sabotage	-	26	9	642	13	161	13	235	42	1064
Other	23	233	19	269	16	50	20	65	78	617
Total	59	703	72	1220	72	617	73	513	286	3053

Source: Shell Petroleum Development Company as in NDWC (1995).

Table 7: Compensation Rates In Oil Exploration Areas

Common Crops	Rates Per (Ha)	Common Trees	Rates Per Trees (N)
Rice	1375	Mango	25
Beans	290	Banana	2.50
Yams	835	Plantain	2.50
Cocoyams	625	Oil palm	12.50
Cassava	000	Ogbono	18.75
Most vegetables	625	Timber hardwoods	50
Bitter Leaf	63	Mangroves	62/ha

Source: Gberesu in NEST as in NDWC (1995)

due to sabotage. A total of 1372 barrels of oil (representing 44.9% of total spills) was spilled due to corrosion of equipment and equipment failure, while 1064 barrels of oil (representing 39.9% of total spills) was lost due to sabotage. Unidentified reasons accounted for 617 barrels. So corrosion of equipment (for which the oil companies are responsible) and activities of saboteurs are mainly responsible for oil spillage. It is of interest to find out the reason why the oil companies allow corrosion of equipment. But it may not be unconnected with the fact that what the oil companies pay as compensation in the event of oil spillage is far smaller than the cost of conducting regular maintenance on the equipment (see Table 7).

### 5.4 The Call for Property right Review

The call for a review of property rights came as a result of the grievances of the Niger Delta indigenes regarding the degradation of their environment and the impoverishing of the people due to the negative effect of oil production. The survey report shows that the people of the Niger Delta are not against the production of oil in their area (see Table 8). As shown from Table 8, 73.8% of respondents



**Table 8: Survey Findings on Oil Production and the Environment with Relation to the Call for Property Right Review**

S.No.	Nature of Question	Response Guide	Response/Response Ratio			
			Akwa Ibom	Rivers	Bayelsa	Total
1.	Whether respondent like oil being produced in the Niger Delta	Yes No Undecided Total	30 (83.3) 4 (11.1) 2 (5.6) 36	49 (72.1) 19 (27.9) - 68	65 (71.4) 26 (28.6) - 91	144 (73.8) 49 (25.1) 2 (1.1) 195
2.	Whether respondent is aware of gas flaring and oil spill problems	Yes No Total	33 (91.7) 3 (8.3) 36	67 (94.4) 4 (5.6) 71	85 (93.4) 6 (6.6) 91	185 (93.4) 13 (6.6) 198
3.	Which of the problems (gas flaring or oil spills) is more devastating	Gas Flaring Oil Spills Both are equally likely Total	9 (25.0) 10 (27.8) 17 (47.2) 36	- 30 (42.9) 40 (57.1) 70	7 (8.1) 28 (32.6) 51 (59.3) 86	16 (8.3) 68 (35.4) 108 (56.3) 192
4.	Whether oil companies do compensate people for environmental degradation problems	Yes No Don't know Total	22 (61.1) 4 (11.1) 10 (27.8) 36	28 (39.4) 25 (35.2) 18 (25.4) 71	51 (63.8) 19 (23.7) 10 (12.5) 80	101 (54.0) 48 (25.7) 38 (20.3) 187
5.	Whether compensation is sufficient	Yes No Total	5 (22.7) 17 (77.3) 22	2 (6.1) 31 (93.9) 33	8 (12.1) 58 (87.9) 66	15 (12.4) 106 (87.6) 121
6.	Whether all compensation gets to the people or sabotage is suspected	Suspect sabotage All compensation gets to the people Total	29 (90.6) 3 (9.4) 32	48 (96.0) 2 (4.0) 50	72 (92.3) 6 (7.7) 78	149 (93.1) 11 (6.9) 160
7.	Any community development projects by oil companies?	Yes No Total	16 (45.7) 19 (54.3) 35	49 (72.1) 19 (27.9) 68	67 (75.3) 22 (24.7) 89	132 (68.8) 60 (31.2) 192
8.	The community development projects <i>Note: as stated by those who answered 'yes' as in "above"</i>	Road construction Schools Pipe Borne Water Hospitals Electricity	11 6 3 4 2	14 17 11 16 10	26 25 23 19 24	51 48 37 39 36
9.	Whether projects are adequate <i>(note as in 8 above)</i>	Yes No Total	6 (37.5) 10 (62.5) 16	3 (6.1) 46 (93.9) 49	12 (17.9) 55 (82.1) 67	21 (15.9) 111 (84.1) 132
10.	Whether respondent is aware of the call for community ownership of resources	Yes No Total	20 (55.5) 16 (44.5) 36	38 (64.4) 21 (35.6) 59	71 (78.8) 19 (21.1) 90	129 (69.7) 56 (30.3) 185
11.	Whether respondent supports the call for community ownership of resources	Yes No Total	24 (68.6) 11 (31.4) 35	53 (84.1) 10 (15.9) 63	62 (71.3) 25 (28.7) 87	139 (75.1) 46 (24.9) 185
12.	Whether respondent has ever thought of the possibility of the Niger Delta elite hijacking the management of resources in the event of the granting of communal ownership of resources, thus subjecting the less privileged to further poverty	Yes No Total	23 (63.9) 13 (36.1) 36	27 (43.5) 35 (56.5) 62	54 (64.3) 30 (35.7) 84	104 (57.1) 78 (42.9) 182
13.	Whether if the Federal government now pay priority attention to the Niger Delta in terms of development and functional protection of the environment, the respondent would still support the call for communal ownership of resources	Yes No Total	13 (36.1) 23 (63.9) 36	24 (35.8) 43 (64.2) 67	28 (31.8) 60 (68.2) 88	65 (34.0) 126 (66.0) 191

support continued oil production in the Niger Delta. Majority of the respondents also agreed that the oil companies do compensate the people for environmental degradation problems but that the compensation is not sufficient.

However, not all compensation actually gets to the people. Majority of respondents (93.1%) suspects that the compensation is often tampered with by some people group of people in transit to the communities.

The people (75.1%) support the call for communal ownership of resources. However, there is fear that the Niger Delta elite may hijack the management of the resources, thus subjecting the less privileged to further poverty. For this reason 66% of the respondents submits that they would not support the call for communal ownership of resources if the federal government should come u-p with a policy that would give Niger Delta priority in her developmental programs. In essence the main issue responsible for the Niger Delta crisis is that of economic development of the area. So if greater attention is paid to the development plight of the Niger Delta, the crisis would diminish and cease.

## 6. RECOMMENDATIONS AND CONCLUSION

The Niger Delta has been reviewed in terms of oil production, environmental degradation and the property right regime. Findings reveal that the call for communal ownership of property in the Niger Delta is borne out of the desire for development. The call is emphasized because the Delta environment has been degraded in addition to being underdeveloped. If the federal government would make the Delta a priority in her developmental programs, in addition to a pursuit of visionary environmental development policies, the call for communal management of resources would no longer be popular. The following recommendations are considered useful.

The current penalty imposed on oil companies for degrading the environment should be reviewed in such a way that it would be cheaper to keep the law than to break them. This would cause the oil companies to make protection of the environment their priority.



The oil companies should review their mode of compensating the communities whenever the need arises such that sabotaging such compensations would be reduced considerably.

The oil companies should conduct regular check of their equipment in order to ensure that they are functioning properly. This would help to reduce oil spills that occur as a result of corrosion and failure of equipment.

In order to reduce oil spills resulting from sabotage, the oil companies should give the communities incentives to keep the pipelines intact. This could be done by the oil companies instituting a reward system by which the villagers are rewarded generously if pipelines through their area are not damaged within a given time period.

In conclusion, if the above opinions are adhered to, the crisis in the Niger Delta would be resolved. This could enable Nigeria to realize the desired stability and cohesiveness required for her development.

## 7.0 REFERENCES

- CBN (1996), *Statistical Bulletin* Vol. 7 No. 2: 155
- CBN, *Annual Report and Statement of Accounts*, Various Issues.
- Constitutional Rights Project (CRP), 1999, "*Land, Oil and Human Rights In Nigeria's Delta Region*".
- Eggertsson, Thrainn, 1993, "*Economic Perspectives on Property Rights and the Economics of Institutions*" Beijer Discussion Paper Series No. 40
- Hackett, Steven C., 1992, "Heterogeneity and the Provision of Governance for Common Property Resources" *Journal of Theoretical Politics*. 4(3):325-342
- McCay, Bonnie J., 1993, "*management Regimes*" Beijer Discussion Paper Series No. 38
- McKean, Margaret A., 1992, "Success of the Commons: A Comparative Examination of Institutions For Common Property Resource Management." *Journal of Theoretical Politics* 4(3): 247-281.

- Niger Delta Wetland Centre – NDWC, 1995, *Defining an Environmental Development Strategy for the Niger Delta*, Vol. 2.
- Ogoni 1990, "Ogoni Bill of Rights: A Presentation to the Government and People of Nigeria.
- Regier, H. A. and Grima, A. P., 1985, "Fishery Resource Allocation: An Explanatory Essay". *Canadian Journal of Fisheries and Aquatic Sciences* 42:845-859.
- Rodman, Margaret C., 1989, "Solving The Common Property Dilemma: Village Fisheries Rights in Japanese Coastal Waters". Pp 168-198 in F. Berkes, ed., *Common Property Resources*. London: Belhaven Press.
- Udoh, Reuben K., 1990, *Land Use Policy and Land Ownership in Nigeria*, Ebikwa Ventures, Lagos.
- Udofia E. P. and Ikurekong E. (1998), "Acid Deposition and the Environmental Quality of Iko, A Nigerian Oil Mineral Producing Community" in *Geography and the Nigerian Environment*, I. E. Ukpom ed. Pp. 203-209.
- Vondal, Patricia J., 1987, "The Common Swamplands of Southeastern Borneo": Multiple Use, Management and conflict. P. 231-249 in B. McCay and J. Acheson, eds. *The Question of the Commons*. Tucson: University of Arizona Press.
- Yocom, T.E.,... (1977), *In Air Pollution*. Academic Press, New York.