

OIL INDUCED ENVIRONMENTAL DEGRADATION IN THE NIGERIA'S NIGER-DELTA: THE MULTIPLIER EFFECTS

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ABSTRACT

This paper examines the oil related environmental degradation in the Nigeria's Niger-Delta and the emerging socio-economic multiplier effects on the people of the region. The study employed tables and charts as well as percentages forms of statistical analysis. Data for the study were mainly secondary sources extracted from the National Bureau of Statistics (NBS) and the United Nations Development Programmes report. The study revealed that the emerging social disorder and HIV/AIDS prevalence in the region is as a result of the economic multiplier effects such as unemployment and high level of poverty. The study then recommends an integrated community based approach involving commitment from all stakeholders.

Keywords: Environmental Degradation, Oil Exploration, Oil Spillage, Economic Multiplier Effects, Integrated Development Strategy

INTRODUCTION

The Niger-Delta area of Nigeria coincides approximately to the south-south geopolitical zone of the country. The region is the most blessed deltas in the world, in both human and material resources but the unfavorable manner in which these resources are harnessed overtime, is the bane of the regions predicament. Before the discovery of crude oil, agriculture was the dominant occupation of the people. Crude oil was discovered in commercial quantity in the region specifically in the present Bayelsa State in 1956 (Omofonmwa and Odia, 2009). Since then oil exploration and exploitation has continued resulting into what is termed environmental destruction due to neglect and less concern of the multinational companies in environmental management in the area.

The environmental degradation resulting from oil and gas production in the Niger-Delta has attracted the attention of environmentalists and other experts, who look at the region within the larger context of globalization (UNDP Report, 2006). The world today recognizes the significance of environmental sustainability to the development of the nations. In fact one of the cardinal objectives of the Millennium Development Goal is to ensure environmental sustainability. It then implies that there should be reduction in environmental degradation.

The issue of environmental sustainability cannot be overemphasized in the Niger-Delta as this is fundamental to the overall well being and the development of the area especially the well being of future generation which is an important aspect of environmental economics. The Niger-Delta region is dominated by rural communities that depends solely on the natural environment for subsistence living. More than seventy percent of the people depend on natural environment for living and non-living livelihood (UNDP Report, 2006). Poor people are vulnerable to environmental dynamics because social, political and economic exclusion indicates they are left with few choices about where they live (Aluko, 2004). Hence, they bear the adverse effects of natural hazards, biodiversity loss and forest depletion, pollution and the negative impact of industrialization vis-à-vis oil exploration.

Environmental degradation issues are of topical concern to communities in the Niger-Delta as it is a major cause of productivity losses (Opukri and Ibaba, 2008). This is the main reason why oil and gas extraction impact on the Niger-Delta cannot be overemphasized as the dominant view blames the oil production and its attendant consequences for the declining productivity of the region which is predominantly based on fisheries and other agricultural activities as farming, dealing in timber businesses, etc. (Okoko, 1998, Aaron, 2006; Opukri and Ibaba, 2008). It is no doubt to say that oil production has worsened environmental disaster in the region.

The elasticity of environmental degradation with respect to oil production is elastic in the region everyday and this is well known. These include among others degradation of the forests and depletion of aquatic fauna. The long-term impacts are also possible, as in cases where mangrove swamps and groundwater are harmed. The issue of oil induced environmental disaster and its numerous effects are devastating in the region.

Most studies regarding the connection between oil related environmental problems and the impact on the region have not really done extensive work on the link between the economic effects and the resulting social effects. This is because there are numerous economic and social effects resulting from the former. Most of the studies in isolation only examined one of either economic or social

effects. So this study seeks to fill this gap by examining the various economic effects and its resultant to the social effects in the region. For instance a recent study by Omafomwa and Odia (2009) on oil exploration and the impact on the Niger-Delta employing a theoretical analysis revealed that the causes of the crises in the region is sequel to the inability of the multinational companies involved in their explorations and exploitations of crude oil, and the federal government of Nigeria to mitigate the consequences of their activities in the region. This study reflects only one of the social effects of these oil activities on the region.

Opukri and Ibaba (2008) in their study on oil induced environmental degradation in the region and conclude that it results into internal population displacement. They adopted descriptive survey method of analysis using secondary data but it reflected only on one of the social effects of these activities on the people of Niger-Delta.

Aluko (2004) in his study on environmental degradation and its impact on the Niger-Delta region used primary data sourced from thirteen communities in the area employed descriptive analysis. He concludes that oil exploration activities in the region leading to environmental degradation are responsible for the high degree of poverty in the area. This study was based on one of the economic effects of environmental degradation.

Gabriel (2007) in his study on environmental issues and challenges in the Niger-Delta focuses on its impact on women economic activities in the area. He employed a theoretical approach to highlight the emerging effects of the environmental hazards on the region and concluded that it has adverse effects on women activities. This also has not discussed the effects from the socio-economic point of view comprehensively but only an aspect of economic effects.

The main thrust of this paper is to examine the two dimensional effects of this devastating oil exploration related environmental destruction in the region vis-a-vis economic and social dimensions. Section II of the paper examines oil exploration and environmental degradation in the region, section III delves on the resulting multidimensional effects of the oil activities on the region and section IV concludes the paper.

OIL EXPLORATION AND ENVIRONMENTAL DEGRADATION

The exploration and exploitation of crude oil in the Niger-Delta has resulted to a number of environmental problems for the region. These environmental problems related to oil operations in the region are examined in this section. Since 1956 when the first oil well was drilled at Oloibiri in the

present Bayelsa State over 1,481 oil wells have sprang up, producing from about 159 oil fields. There are more than 7,000 kilometers of pipelines and flow lines and 275 flow stations operated by more than 13 oil companies (UNDP Report, 2006).

The productive and environmental impacts of the number of operators are at increase everyday in the region. The percentage of the land of the region occupied by the oil industry is less than five percent but the adverse effects associated with its operations are innumerable and region-wide. This oil related environmental problems are discussed below.

Water Pollution

The Niger-Delta region is located in the coastal part of Nigeria and this is a waterlogged area as more than eighty percent of the oil producing communities is on water. Before the discovery of oil in the region, it was characterized by natural clean long stretch fresh water and healthy water lettuce that add beauty and flavor to the environment. According to Bisina (2006) the oil activities in the area has resulted to situations whereby complete polluted water is bequeathed to the children. The communities' shorelines have been washed away or eroded due to the high volume of deep-sea exploration and exploitation activities. One of the major oil induced water pollution is oil spillage. With the expansion of oil production, the incidence of oil spills has greatly increased. Available records show that a total of 6,817 oil spills occurred between 1976 and 2001 with loss of approximately three million barrels of oil in the region. Approximately twenty-five percent spilled in swamps and sixty-nine in off-shore (UNDP Report, 2006).

Besides oil spills as source of water pollution, canalization and wastes discharged into freshwater swamps and into the sea are other sources (Akpofure, 2008). In an attempt to shorten travel time and improve access to oil fields and production facilities, oil companies have constructed canals that in some cases have caused salt water to flow into fresh water zones destroying freshwater ecological systems. The table below shows time series data on oil spills in the region.

Table 1: Time Series Analysis of Oil Spill in the Niger-Delta

Year	No. of Spill	Quantity Spilled(in barrels)	Quantity Recovered (in barrels)	Quantity Loss to the Environment(in barrels)
1976	128	26157	7135	19021.5
1977	104	32879.25	1703.01	31176.75
1978	154	489294.75	391445	97849.75
1979	157	94117.13	63481.2	630635.93
1980	241	600.511.02	42416.83	558094.2
1981	238	42722.5	5470.2	37252.3
1982	257	42841	2171.4	40669.6
1983	173	48351.3	6355.9	41995.4
1984	151	40209	1644.8	38564.2
1985	187	11876	1719.3	10157.3
1986	155	12905	522	12358
1987	129	31866	25757	25757
1988	208	9172	1955	7207
1989	228	5956	2153	3803
1990	166	14150.35	2785.96	12057.8
1991	258	108367.01	2785.96	105912.05
1992	378	51187.9	1476.7	49711.2
1993	453	8105.32	2937.08	6632.11
1994	495	35123.71	2335.93	32787.78
1995	417	63677.17	3110.02	60568.15
1996	158	39903667	1183807	38716.87
Total	4647	2369470	549060.38	1820410.5

Source: Uyigue and Agho, 2007

Land Degradation and Forest Deforestation

Vegetation in the Niger-Delta is comprised of extensive mangrove forests, brackish swamp forests and rainforests. The large expanses of mangrove forests are estimated to cover approximately 5,000 to 8,580 km² of land (Oil Spill Intelligent report, 1978). Mangroves remain very important to the indigenous people of Nigeria as well as to the various organisms that inhabit these ecosystems. It is unfortunate that these oil activities have destroyed the extensive mangrove forests in the area. Apart from the illegal logging brought on by increased accessibility to forests, oil exploitation itself has depleted biodiversity, especially at ramp sites, flow stations and terminals. A lot of land degradation and forest deforestation were caused by oil induced fire and pollution on the environment. A number

of oil induced fire outbreak has occurred in the Niger-Delta leading to deforestation and destruction of farmland such as the Jesse fire incident that occurred in October 17, 1998. The unfortunate thing was that this fire incident did not only destroyed farm lands or natural ecology but also killed more than 1,000 people of the community (Ofehe, 1999). Another fire incident occurred in September, 2004 in Okirika community, Rivers State that lasted for 3 days and destroyed the plants and animals inhabiting the affected area (Zabbey, 2004). Another fire scourge occurred in Ugbomro community and a study was carried out to ascertain the effect on the soil and it was discovered that contrary to the popular opinion that fire improvises bush fallowing for cropping, the site witnessed severe impoverishment not only from the fire incidence but also from the oil spill on the site (Osuji and Ukale 2000). Other sources of land degradation and loss of biodiversity as well as forest and crops destruction in the region are acid rain from gas flaring.

Table 2: Ranking of Major Environmental Problems in the Niger-Delta

Problem Type	Problem Subset	Priority Ranking
Natural Environment	Coaster/River bank erosion	Moderate
	Flooding	High
	Sedimentation/Silt	Moderate
	Substance	Low
	Exotic (water hyacinth)	Low
Development Related	Land degradation/Soil fertility Loss	High
	Agricultural decline/ shortened fallow	High
	Delta forest loss(Mangrove)	High
	Biodiversity depletion	High
	Fishery Decline	High
	Oil spillage	High
	Gas flaring	Moderate
	Sewage and waste water	High
	Other Chemical	Moderate

Source: Okon and Egbon, 1999

Air Pollution

About ninety-five percent of waste gases from the production fields and operation are flared. Gas flaring pollutes the air and it is common practice among companies in Nigeria especially in the Niger-Delta region which is hazardous to the ozone layer of the area and leading to climate change (IPCC, 2007). The flaring of gas has been practiced in the Niger-Delta for over four decades. This is the major source of air pollution in the area as well untreated waste disposal on the environment.

Today, there are about 123 flaring sites in the region making Nigeria one the highest emitter of green house gases in Africa (Uyigüe and Agho, 2007). Some 45.8 billion kilowatts of heat are discharged into the atmosphere of the Niger-Delta from 1.8 billion cubic feet of gas everyday (Aaron, 2006). It is not an exaggeration that gas flaring is environmentally unethical and has contributed significantly to the degradation of the environment in the region. This practice may have altered the vegetation of the area, replacing natural vegetation with stubborn grasses and the presence of these grasses indicates that the soil is no longer fertile for cultivation of crops. A major example could be seen in Opuama and Sekewu communities in the Warri North Local Government Area of Delta State in the region. It is evident that gas flaring has affected the ozone layer of the region leading to climate change that is unhealthy to crops cultivation (IPCC, 2007).

OIL EXPLORATION AND ENVIRONMENTAL DEGRADATION IN THE NIGER DELTA: THE MULTIPLIER EFFECTS

The main thrust of the paper as stated in the introduction is to analyze the economic and social multiplier effects resulting from what deep ecological thinking called “entropy law” emanated from oil activities in the Niger-Delta. The devastation of the environment and ecological balance by oil and gas exploitation in the region has multidimensional implications for the people of the region.

The various environmental hazardous issues vis-à-vis: air pollution, water pollution as well as land degradation earlier discussed, it is no doubt to say that the source of income of the region is hampered with which has multivariate social implications for the people. The region leads in the production of timber, pineapple, gin and fish. Other things produced in the region are cocoa, cashew, rice, yam and oranges in large quantities but these are history in the region now (Omofonmwan and Odiá, 2009). Hence, this section is to analyze some of the economic and social dimensional effects caused on the people.

Economic Multiplier Effects

The economic multiplier effects of the oil induced environmental degradation experienced in the Niger-Delta are identified as follows:

- i. Alarming Unemployment Rate:** With the destruction of the main source of income and productive activities of the region, one of the economic concerns of the region is the resultant increasing unemployment (Okon and Egbon, 1999). As revealed in the previous section, most of the farm lands are destroyed and the rivers are polluted leading to death of fishes, most of the farmers and fishermen are thrown into confusion of joblessness. The table and the figure below show the unemployment rate in the region compared to the national average.

States	Comp	Urban	Rural	
Abia	10.6	8.70	10.8	
Ak-Ibom	36.9	29.8	37.1	
Bayelsa	23.6	20.7	24.1	
C-Rivers	16.6	7.30	18.3	
Delta	23.3	23.5	19.0	
Edo	14.3	24.0	11.8	
Imo	22.3	23.8	32.8	
Ondo	17.0	14.0	19.8	
Rivers	34.2	27.5	35.2	
All Nigeria	18.1	14.2	19.8	

Source: Federal Office of Statistical News, 2001

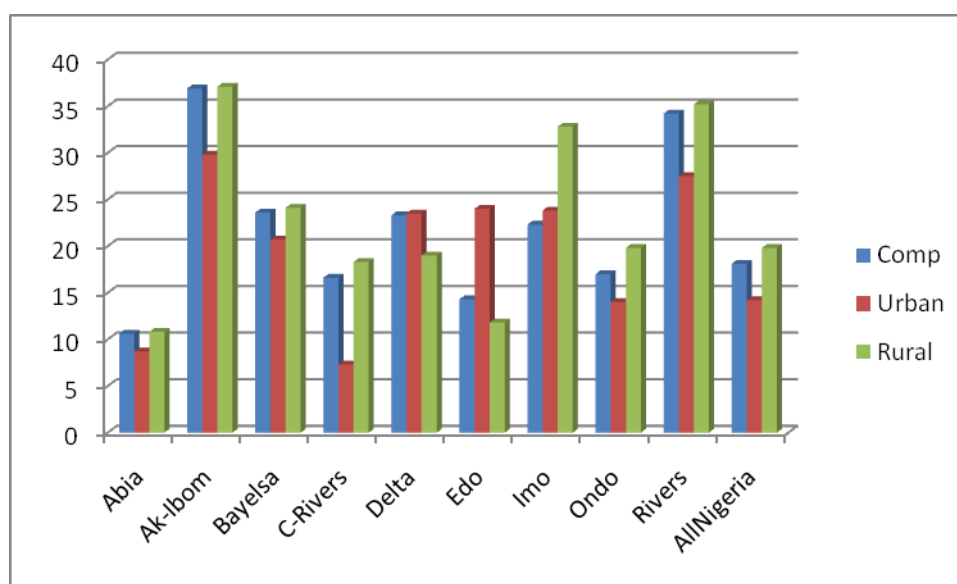


Figure 1: Geometrical Analysis of Unemployment Rates

It is observed from the above table and figure that unemployment rates are high in the core Niger-Delta states (Akwa-Ibom, Bayelsa, Delta and Rivers) compared to the national average. In the above states, the region is much more critical and main oil producing states. The situation is much worse in the rural areas where the bulk of the population lives in the riverine areas. And the main oil activities takes place in the rural areas of these states. The table revealed that in the rural areas, unemployment rate is 37.1, 24.1 and 35.2 in Akwa-Ibom, Bayelsa and Rivers respectively compared to the national average of 19.8. What comes after such unemployment problem is alarming poverty.

ii. **High Level of Poverty:** People are hungry not because there are no foods but they cannot afford to buy it (Eregha, 2001). The statement above shows the link between unemployment and poverty as it affects the region that account for the main source of foreign exchange earnings for the country. It is no doubt to state that if oil sector sneezes the country will catch cold. This emphasized what the Niger-Delta region means to the country. The issue of poverty cannot be overemphasized in the region. The contextual meaning of poverty is really emphasized and defined to a lay man by the environment and the ways of life of the people. The incidence of poverty is at increase in the region as revealed in the table below. Poverty has become a way of life due to economic stagnation, unemployment, malnutrition, poor quality of life as well as unhealthy environment in the region.

iii.

Column1	Column2	Column3	Column4	Column5	Column6	Column7
States		1980	1985	1992	1996	2004
Edo/Delta		19.8	52.4	33.9	56.1	78.44
C-Rivers		10.2	41.9	45.5	66.9	41.61
Imo/Abia		14.4	33.1	49.9	56.2	49.66
Ondo		24.9	47.3	46.6	71.6	42.15
Rivers/Bayelsa		7.2	44.4	43.4	44.3	49.07

Source: National Bureau of Statistics, 2004

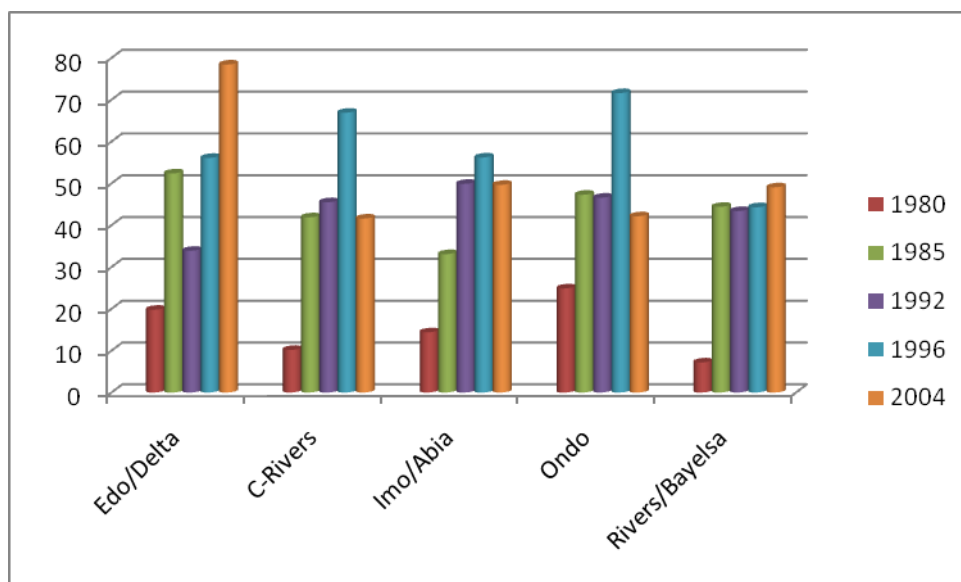


Figure 2: Analysis of Poverty Level in the Niger-Delta

The table revealed that in Edo/Delta States, the incidence of poverty increased from 19.8% in 1980 to 52.4% in 1992. It later increased again to 78.44% in 2004. The case is almost the same

for other states. For instance in Cross Rivers, the figure increased from 10.2% in 1980 to 41.9% in 1985 which is more than 3times increase after five years. In Imo/Abia states the figure increased from 14.4% in 1980 to 33.1% 1985 and later increased to 49.9% and 56.2% in 1992 and 1996 respectively. A close examination of the table and chart revealed that aggregate relative incidence of poverty in the region is alarming and call for attention. In the UNDP report, poverty in the region is termed as people who cannot pay school fees for their children or meet any needs such as food, having no farmland and cannot farm well, having no house to live. In another dimension, the report also explains the concept of poverty in the region as being sick and unable to see doctor.

Column1	Column2	Column3	Column4
Zone		1985/86	1997
North East		53.2	68.0
North West		48.4	62.0
Middle Belt		48.4	53.0
South East		30.9	79.5
South West		42.0	74.1
South-South		38.0	78.6

Source: National Policy on Poverty Eradication, 1998.

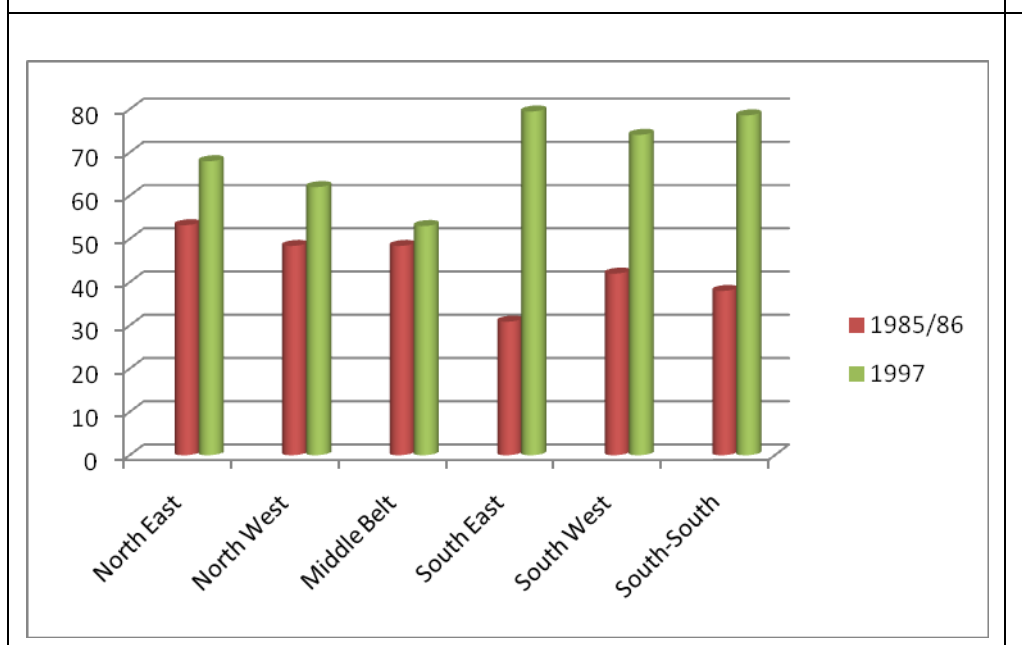


Figure 3: Geometrical Analysis of Poverty Level by Zone

It is also evident from the table above that poverty is high in the region. The South-south geo-political zone is the core Niger-Delta region and the figure revealed in 1985/86 that poverty level in the south-south was 38% but increased to 78.6% in 1997. Some parts of south-east are Niger-Delta region and the figure in that geo-political zone is high also compared to others. Other economic effects are high illiteracy rate, low human development, underemployment, low productivity, cheap labor and child labor which are cumulative effects of the link between the alarming unemployment rate and high level of poverty as well as the prevalence of HIV/AIDS analyzed under social effects.

Social Dimensional Effects

The emerging social effects as a spillover from the economic multiplier effects analysed above are alarming rate of social disorder, youth restiveness, robbery, militancy, rape, conflicts and hostage taking. Other social effects are HIV/AIDS prevalence and population displacement arising from oil induced fire outbreaks.¹

- i. *Conflicts, Youth Restiveness and Hostage Taking:*** The oil-rich Niger-Delta region has experienced an explosion in the number of conflicts ranging from intra-community to inter-community as well as communities and oil company conflicts. Social unrest has been the order of the day in the region. It is not an exaggeration to state categorically that most of these conflicts lead to lost of lives and destruction of properties of this poor people. The region is also experiencing various forms of hostage taking for financial and political gain.

The exponential increase has largely been the result of activities of various militant groups. Youth restiveness and violence, acrimony and confrontation have been the ugly situation in the region. Youth restiveness is the direct resultant effect of poverty and unemployment. Box 1 below shows some of the conflicts, youth restiveness, hostage taking and other forms of social unrest in the region.

¹ See Opukri, C. O. and Ibaba, S. I. (2008) more on population displacement effect of oil related activities.

Box 1: A Catalogue of Escalating Violence in the Niger Delta, 2003-2006

1. 2003: At Irri, Isoko South local council, a traditional ruler was alleged to have sold the rights of the community to Agip Oil. This sparked off violence. At the end of the imbroglio, no fewer than the palace of the traditional ruler who took to his heels in the heat of the crisis.
2. January 2003: Indigenes of Ohoror-Uwheru community in Ugbelli North local council were attacked by a detachment of soldiers from the Joint Security Task Force .Operation Restore Hope.
3. 21 March 2003: While the Security Task Force was on patrol off n 10 persons died and property worth millions of naira was vandalized, including the Escravos River, youths attacked the team with 17 speedboats at Oporosa on the Escravos Creek, killing three soldiers and one naval rating.
4. 22 March 2003: Youths struck at the TotalFinaElf tank farm in Oponani Village and killed five soldiers and destroyed property worth billions of naira.
5. 2 May 2003: Barely 24 hours after the state House of Assembly election, youths brandishing AK-47 pump rifles and other light weapons attacked the naval base, leaving two naval ratings severely injured.
6. 7 November 2003: Eight mobile policemen were reportedly killed by youths between Otuan and Oporoma in Southern Ijaw Local Government Area of Bayelsa State.
7. April 2004: Five persons including two Americans were killed by militant youths. They were among nine people travelling in a boat along Benin River, West of Warri, when they came under what was described as .unprovoked attack.. The two American expatriates were the staff of ChevronTexaco.
8. April 2004: Five persons including two Americans were killed by militant youths. They were among nine people travelling in a boat along Benin River, West of Warri, when they came under what was described as .unprovoked attack.. The two American expatriates were the staff of ChevronTexaco.
9. 14 April 2004: Ijaw youths attacked and killed four children including a 90-year community leader, Madam Mejebi Eworuwo, in Koko, headquarters of Warri North Local Council, Delta State.
10. 23 April 2004: About nine members of the Joint Security Task Force, .Operation Restore Hope., in charge of security in Warri were killed by militant Ijaw youths.
11. 2 November 2004: For several hours, youths of Igbudu and soldiers of the Joint Task Force clashed in Igbudu area of Warri, Delta State.
12. 18 November 2004: Ijaw youths from Odioma community in Brass Council in Bayelsa State, protesting an alleged violation of a Memorandum of Understanding (MoU) by Shell Petroleum Development Company (SPDC), shut down and occupied its 8,000-barrel a day flow station.
13. 22 November 2004: At least 17 youths of Ijaw extraction were confirmed dead as soldiers deployed to guard a flow station belonging to an oil-servicing firm shot sporadically into a crowd.
14. 28 November 2004: Ijaw youths clashed with soldiers at Beneseide flow station, near Ojobo in Bayelsa State over breach of MoU.
15. 23 December 2004: The youths in Ogbe-Osewa and Ogbe Ilo quarters in Asaba clashed over a land dispute. Over 100 houses were ransacked, with property running into millions of naira destroyed.
16. 23 December 2004: At Ekpan, Uvwie local council of Delta State, youths clashed over the appointment of Unuevworo (traditional head) of the community.
17. 24 December 2004: Militant youths kidnapped 16 oil workers including a Yugoslav at Amatu Community in Ekeremoh local council of Bayelsa State. They were kidnapped from a vessel identified as Seabulk, owned by an oil-servicing firm working with Shell.
18. 26 December 2004: Alleged similar breach of MoU by SPDC led to the abduction of a Croatian worker, Mr. Ivan Roso, at the company.s Sea Eagle floating crude oil production facility.
19. 21 December 2005: Explosion rocked Shell pipeline in Niger Delta.
20. 22 December 2005: Fire raged in Shell installations causing 13 deaths.
21. 31 December 2005: Explosion rocked Shell pipeline in Niger Delta.
22. 12 January 2006: Pirates took four expatriates hostage.
23. 16 January 2006: Militants attacked another Shell platform and torched houseboats.
24. 16 January 2006: Fourteen soldiers killed in Niger Delta shoot out (*ThisDay*, 16 January 2006)
25. 18 January 2006: Soldiers, Bayelsa militants engaged in gun duel.
26. 18 January 2006: Shell cut oil output by 115 BPD (*ThisDay*, 18 January 2006).
27. 19 January 2006: Federal Government opened talks with militants (*The Punch*, 19 January 2006).
28. 29 January 2006: Oil workers threatened to pull out of Niger Delta.

Source: Adopted from the UNDP Report, 2006

ii. **HIV/AIDS Prevalence:** The prevalence of HIV/AIDS in the region is among the highest in the country, higher than the average for Nigeria. This is due to fact that the region is flooded with people from all over the world as a result of the oil activities in the region. The people seen in the area are foreign expatriates, soldiers and mobile policemen used by the oil firms as well as commercial sex workers. By personal observation as a son of the soil, the people of the region are not aware of the implications of the dreaded disease. Nearly half of the Niger-Delta states have either the same or higher prevalence rates as compared to the national average. This is evident in the statistics and analysis below.

Table 6: HIV/AIDS Prevalence in the Niger-Delta

Column1	Column2	Column3	Column4	Column5
States		1999	2001	2003
Abia		3	3.3	3.7
Akwa-Ibom		12.5	10.7	7.2
Bayelsa		4.3	7.2	4
Cross-Rivers		5.8	8	12
Delta		4.2	5.8	5
Edo		5.9	5.7	4.7
Imo		7.8	4.3	3.1
Ondo		2.9	6.7	2.3
Niger Delta		5.5	6.6	5.4
Nigeria		5.3	5.7	4.8
<i>Source: UNDP Report, 2006</i>				

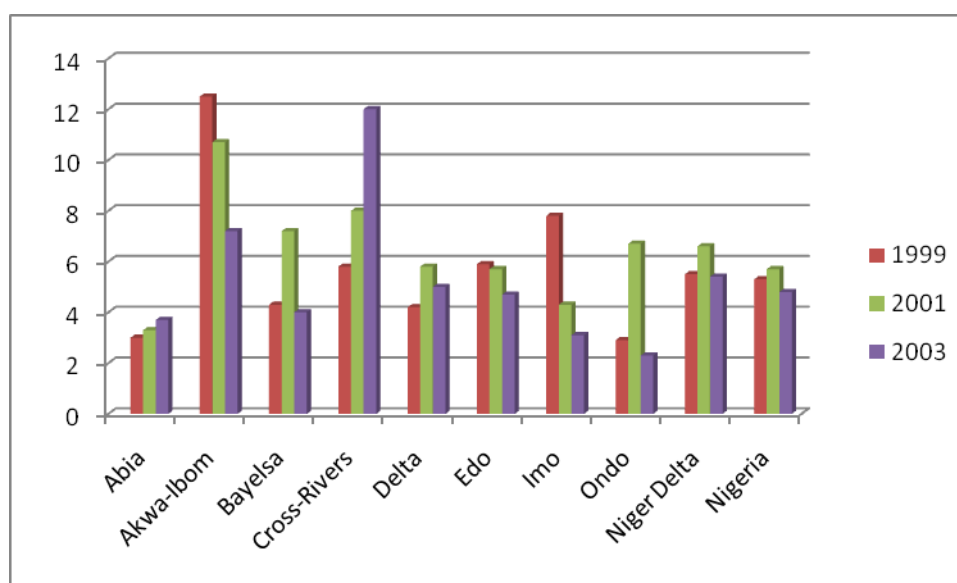


Figure 4: Analysis of HIV/AIDS Prevalence

The impact of HIV/AIDS has been particularly harsh in the region. It is well known that the disease wreaks greater havoc where there is poverty, social inequality and general political marginalization (UNDP Report, 2006). There is a link between HIV/AIDS and poverty. The increasing poverty level leads to increase in the scourge as a result of reduction in access to information, education and services that could reduce the spread of the virus (UNFPA, 2002).

On the other hand, HIV/AIDS also induce poverty increase as those with the virus fall ill and die which led to the family or community losing much needed human capital or productive resources. And the increasing poverty as revealed earlier is generated majorly by oil induced destruction of the natural ecology the people relied on. A social problem generating serious concern is the increase of commercial sex workers patronized by oil company workers. Informants lamented the increasing social decadence and decline in the traditional social values as prostitution is now rampant in the area. The appeal for easy money is a serious temptation to both ladies in the region and from other areas as well as the poverty-stricken families (EMRI field survey, 2005 as cited in the UNDP Report, 2006).

CONCLUSION

In this paper, we have highlighted the devastation of the Niger-Delta environment as a result of several decades of oil production and the profound changes that had adverse effects on the local livelihoods and social well-being. The Niger-Delta environment has suffered degradation as a result of oil and gas exploration leading to air pollution, water pollution and land degradation from oil spillage, gas flaring and canalization.

We also stated that such devastating activities on the environment on this poor people who relied on the environment for livelihood has resulted into a number of multiplier effect on the people. These effects range from economic to social dimensions as well as health and psychological dimensions. Though, this paper delved into the former and revealed that a number of social vices experienced in the region are direct effects from the economic implications introduced into the region by oil activities. As established so far, the region is faced with myriads of environmental problems and diverse of social economic constraints that are making life unbearable for the people of the region. Today the Niger-Delta is in turmoil, restive, poor, backward and neglected.

Based on the consequences of oil activities in the region, we hereby recommend an integrated approach which is a combination of several development strategies. This calls for the establishment of community based integrated approach that needs joint committed efforts from the government and

the multinational companies as well as other stakeholders. This integrated approach should focus on the following issues: building of human and institutional capacity to improve fish production and management; testing and recommending suitable environmental management measures; reduction of water hyacinth infestation; Identification of the causes of water quality deterioration; initiation of community and commercial as well as central forestry programs; improvement of fish quality for exports and domestic consumption; improvement of land use practices and other agricultural activities; youth re-orientation and access to quality education; establishment and access to technical and vocational studies.

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