Environmental Protection Laws and Sustainable Development in the Niger Delta

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Abstract

This paper examines the link between Nigerian environmental protection laws and the sustainable development of the Niger Delta. To achieve this objective, the paper highlights the environmental challenges of the region, and critically examines some environmental laws to determine their usefulness and effectiveness in dealing with environmental problems.

The paper argues that due to the privatization of the Nigeria state, and its consequent use by those in power to promote private gains, the state has not shown serious concerns for the environment. This lack of concern is reflected in the weak environmental laws and the lack of their enforcement. The paper concludes that the laws have failed to protect the Niger Delta environment, and the resultant environmental degradation has impeded the sustainable development of the region. Good governance is suggested as the most likely solution.

Introduction

Environmental degradation is a major cause of productivity losses and poor human health in the Niger Delta (World Bank, 1995:117). Thus, environmental degradation issues are of topical concern to communities in the area. (NDES, 1995:2). A significant feature of environmental degradation in the Niger Delta is that it is largely the outcome of pollution and unsustainable exploitation of natural resources. Significantly, there are numerous Nigerian environmental laws which seek to conserve, guide, control and mange the exploitation of natural resources, along with the control and prohibition of environmental pollution (FEPA Act, 1990). To this end, the unsustainable exploitation of the environment in the Niger Delta is blamed on the inability or failure of the environmental laws to correct acts as well as attitudes and beliefs, which impact negatively on the environment. Adibe and Essaghah (1997:76-89) have noted in this regard that:

> Industrial operators (other than in the petroleum subsector) are apparently not guided by any environmental protection… legislations…where such…legislations exists, conformance with them is not systematically monitored and effectively enforced… it is not surprising that neither industrial establishments nor government agencies responsible for overseeing the industrial sector and environmental matters have a mechanism for monitoring and evaluating impacts of industrial pollution with a view to controlling and managing them.

Equally, the isolation of the environmental laws from the development programs and policies of the state, faults in the implementation strategies or techniques, inadequate penalties for violation, the non-involvement of the citizenry in the formulation and execution of the laws, and the lack of a clear focus, are also seen as factors which have become obstacles to the proper execution of the laws.

In all however, the lack of enforcement of the laws stand out as the most fundamental cause of the inability of the legislations to protect the Niger Delta environment. This is blamed on inadequate funding, corruption, the lack of operational facilities, the low involvement of professionals, the uncooperative attitude of the multinational corporations, and the centralization of legislative powers in the central government, along with the privatization of the Nigerian state.

This paper sets out to examine the latter view, and examines its implications on sustainable development. The discussion is guided by the United Nations' view of Sustainable Development which describes the guarantee of development for all generations; through environmental protection and sustainable exploitation of natural resources. (http://www.iisd.orga/webmaster@isd;WCED,1987:43).

Environmental Challenges of The Niger Delta

The ecology of the Delta is characterized by sandy coastal ridge barriers, brackish or saline mangrove, fresh water, permanent and seasonal swamp forest, and dry land rain forest (Okoko and Ibaba, 1997:2). The Niger Delta is characterized by the Rainy season which lasts from April to October, and the Dry season and Harmattan which briefly intervenes the latter period. Nearly three quarters of the area is covered by water made of lagoons, creeks, rivers and lakes (OMPADEC Report, 1993:80-82). The remainder is largely made of swampy land, which is usually flooded for about four months in the year due to the overflowing waters of the lower Niger. The environment faces a number of challenges, which constrain the development of the region.

The environmental problems of the area are grouped into two broad categories: oil related and non-oil related environmental problems. According to the Shell Petroleum Development Company (SPDC), the most common environmental problems related to the oil industry are: oil spills, gas flaring, dredging of canals and land for the construction of facilities. (http:/www.ShellNigeria.com). The non-oil related environmental challenges include: Coastal/river back erosion, flooding, spread of exotic species, agricultural land degradation, fisheries depletion, inadequate sanitary and waste management, and emission discharges from industries. (www.shellnigeria.com). The table provides details on the environmental problems.

Table 1
Major Causes of Environmental Degradation in the Niger Delta

Problem Type	Problem	Direct Causes	Indirect Causes
Land resource degradation	Erosion-coastal	Sediment loss infrastructure construction	Upstream dams population pressure Weak enforcement Natural and human induced and subsidence Sea level rise.
	Erosion-riverbank	Heavy rainfall. Unsustainable farming. Sediment loss	Upstream dams Population pressure Weak enforcement Natural and human induced and subsidence Sea level rise.
	Flooding	Heavy rainfall Agricultural expansion reduced upstream water retention	Upstream dams population pressure Weak enforcement Natural and human induced and subsidence Sea level rise.
	Sea level rise		International air emission
	Agricultural land Degradation	Climate change Unsustainable farming Decreased sedimentation Excessive flooding Increased	Population pressure Upstream dams Lack of inputs.

		erosion.	
Renewable Resource Degradation	Fisheries -stock depletion	Fishing techniques Fishing intensity Post harvest losses	Population pressure Weak enforcement Open access (limited)
	-habitat degradation	Trawling pollution Oil activities Nutrient loss.	Post harvest losses. Weak enforcement Open access Upstream dams.
	Forestry -deforestation degradation	Agricultural expansion Infrastructure expansion Indiscriminate logging	Population pressure Weak enforcement Infrastructure expansion Open access (limited)
	Biodiversity loss	Hunting Habitat loss	Incomplete markets Population pressure Infrastructure expansion
	Exotic species Expansion - (1) water hyacinth (2) Nypa palm water contamination	Introduction (1,2) Forest degradation	Weak enforcement Open access (limited) Incomplete markets. Weak enforcement Open access.
Environmental Resource Degradation	-oil	Inadequate wastewater management Spills and leaks	Weak enforcement Incomplete markets.

	-industrial	Inadequate wastewater management	Weak enforcement Open access. Incomplete markets
	-toxic and hazardous substances	Inadequate waste management Inadequate urban infrastructure	Weak enforcement Open access Incomplete markets.
	-others	Inadequate sewage treatment	Population pressure Weak enforcement Open access Incomplete markets
	Air pollution -gas flaring, industrial vehicular 0	Industrial population Vehicular emissions.	Weak enforcement Open access Incomplete markets Subsidies.
	Solid wastes -industrial municipal	Inadequate waste management Inadequate urban infrastructure	Population pressure Weak enforcement Open access Incomplete markets

***Source*:** World Bank, 1995:86-88.

Also, communication is very difficult and perhaps more significantly, the cost of development (provision of social infrastructure, etc) is exceedingly high. The cost of providing infrastructure in the region doubles and at times triples the cost of infrastructural development in the other parts (South, East, West and the North). For example, the cost of land reclamation alone can fund a project in other areas. Thus, the Bayelsa State government has spent a whopping 500 million naira on land preparation alone (sand-filling) for a 500-bed hospital in the State capital. This sum can fund the entire project in other areas. It cost about N150 million to construct a kilometer of road in the Niger Delta, as against N25 million in other areas. (Ibaba, 2004:58)

Meanwhile, the funds available for development in region are grossly inadequate. The lack of infrastructure and basic amenities as well as the high level of poverty, about 70 percent, (UNDP, 2006:69) impacts negatively on the Niger Delta environment. On infrastructure, the impact is in two dimensions. The absence of basic infrastructure puts pressure on land. For example, the lack of roads makes it difficult for the rural populace to obtain kerosene and when they do, it is very expensive. Thus, over 80 percent of rural people use fuel wood as energy for domestic use and consequently, contribute to the problem of deforestation.

At another level, the drive to provide social infrastructure promotes environmental degradation. For example, the sand-filling (land reclamation) of areas provides amenities (buildings, roads, etc) but causes severe flooding in other areas. On poverty, it is widely known to degrade the environment.

A significant point to note here is that poverty promotes an unsustainable exploitation of natural resources. For example, poverty leads to the over-exploitation of farmlands. Similarly, all kinds of fish, including fingerlings, are appropriated. In times past, fingerlings and other categories of small fish were selected and thrown back into the river.

The low level of technological development in the region also constitutes a problem to the environment, as it makes the taming of the environment difficult. Some environmental problems of the state, the spread of water hyacinth for

example, are potential sources of development, but for the lack of technology. Studies have shown that water hyacinth, considered to be one of the worst weeds in the world, and widely found in the Niger Delta, has the following uses:

(i) Water hyacinth has a high ash content of 14.3 percent and important nutrients, which could make it a valuable composite fertilizer.
(ii) The fibers and dried stem can be used for straps of shoes and clogs for baskets and chairs.
(iii) The fresh petioles are based stalks for the cut flower industry (one bundle composed of 10 water hyacinth cluster costs 1.5 – 5.0 pesos in Metro Manila outlets).
(iv) It is a potential source of activated carbon for batteries, of carbon black for paint, and for cement boards.
(v) Water hyacinths have been used for biogas production. From one ton of water hyacinth, a biodigester can produce 373m^3 of methane gas (5,700k cal).
(vi) Water hyacinth is used as a low-cost wastewater treatment in which the plant absorbs nutrient and toxic residues. (OMPADEC Report, 1993:4).

Also of significance is the challenge violent conflicts pose to the environment through the destruction of infrastructure, settlements, fishing grounds, farmlands and lives. Equally, the sabotage of oil installations undermines environmental quality through oil spillages.

All the literature on the Niger Delta environment identifies environmental degradation as the greatest challenge to the region's environments. Three major challenges or problems have been identified: land resources degradation, renewable

resource degradation, and environmental resource degradation. (World Bank, 1995:86-88).

State Legislations On The Environment And Sustainable Development In The Niger Delta

Environmental protection legislation in Nigeria dates back to the colonial period. The numerous environmental laws include: the Forest Ordinance (1937); the Water Works Act (1915); the Public Health Act (1917); (1958); the Petroleum Drilling and Production Regulation (1969); the Oil in Navigable Waters Act (1968); the Ministry Act (1969); the Associated Gas Re-injection Act (1979); the Federal Environmental Protection Agency (FEPA) Act (1988). Similarly, the Federal Government created the National Resources Conservation Council (NRCC) in 1988, and also launched the National Policy on the Environment in 1989. (Emeribe, 2000).

Despite these legislations and policies on environmental protection and conservation, environmental degradation has continued to worsen in the Niger Delta. The widespread view blames this on the ineffective execution of environmental protection laws in the country. The World Bank (1995), identifies the lack of enforcement of environmental laws as one of the greatest problems of the Niger Delta environment. Enforcement agencies lack the mechanism for monitoring and evaluating the impacts of industrial pollution with a view to controlling them. (Adibe and Essaghah, 1999:76-89).

The isolation of the environmental laws from the development programs and policies of the state, faults in implementation

strategy or techniques, inadequate penalties for violation, the non-involvement of citizens in the formulation and execution of the laws, and the lack of a clear focus, are also seen as factors which have become obstacles to the proper execution of the laws. The lack of enforcement of environment laws is seen as the most fundamental cause of the inability of the legislations to promote the sustainable exploitation of natural resources in the Niger Delta.

This paper blames this on the nature of the Nigerian State. Politics in Nigeria are seen as a means of accumulating wealth. The consequence is the privatization of the State and its subsequent use for the pursuit of private interests (Aaron, 2006; Ekekwe, 1986; Ake, 2001[a], Ake, 2001[b]; Oyovbuaire, 1980). The result of this is the neglect of the environment. Thus, the provisions of environment laws create gaps which weaken enforcement standards and regulations that could be contravened as being loosely specified and vaguely defined (Adibe and Essaghah, 1999:83). Some environmental protection laws are analyzed below to demonstrate why and how they have failed to protect the environment.

(a) **The Environmental Impact Assessment Act (EIA)**

The EIA Act, among others, sets out the procedures and methods to enable the prior consideration of environmental impact assessment on certain public or private projects. To achieve the objective of the act, the Federal Environmental Protection Agency (FEPA) (now the Federal Ministry of Environment) is empowered to facilitate environmental assessment of projects.

Essentially, the EIA law requires that before the commencement of any new project, its environmental impact must be assessed or evaluated with a view to mitigating its effects on the environment. Accordingly, section 2(i) of the Act, states that:

> The public or private sector of the economy shall not undertake, embark or authorize projects or activities without prior consideration, at an early stage, of their environmental effects.

Equally, section 1(2) provides that:

> Where the extent, nature or location of a proposed project or activity is such that is likely to significantly affect the environment, its environmental impact assessment shall be undertaken in accordance with the provision of this Act.

The "minimum content of environmental impact assessment" were prescribed as follows:

(i) A description of the proposed activities;
(ii) A description of the potentially affected environment including specific information necessary to identify and assess the environmental effect of the proposed activities;
(iii) A description of the practical activities, as appropriate;
(iv) An assessment of the likely or potential environmental impacts of the proposed activity and

the alternatives, including the direct or indirect cumulative, short term effects;

(v) An identification and description of measures to mitigate adverse environmental impacts of proposed activity and assessment of those measures;

(vi) An indication of gaps in knowledge and uncertainty, which may be encountered in computing the required information;

(vii) An indication of whether the environment of any other state or local government area or areas outside Nigeria is likely to be affected by the proposed activity or its alternatives.

With the above, the federal ministry of environment evaluates the submissions, holds wide consultations with all stake holders and then makes a decision; it is the final arbiter on such issues. In the Niger Delta, the law is not adhered to strictly in the private sector; only companies in the oil and gas sector reasonably abide by the law. Even at that they undertake unethical practices, which flout the law.

Establishments in the private sector (manufacturing companies, etc) hardly undertake EIA studies for their activities, even though such activities impact on the environment. This is also true of public projects undertaken by the three tries of government (Federal, State and Local Governments).

Oil companies, who embark on EIA studies, violate the rules. There are instances where they have commenced the project before the EIA study is done. For example, the Shell Petroleum Development Company (SPDC) commenced a

multi-billion dollars project, the Estuary Amatu (E.A) project which cut across communities in Bayelsa and Delta States before EIA commenced (Environment Watch, 15/8/2001).

Also, EIA studies are not properly done, which creates problems for communities. For example, the construction of the Gbarain link road (in Bayelsa State) by the SPDC without a proper EIA study has created environmental problems and socio-economic difficulties for the host communities (Opolo, Obunugha, Onopa, Gbarantoru, etc). The identified problems include: severe or excessive flooding of forest and farmlands which leads to the destruction of food crops, economic trees; a reduction in available farmland, thus creating land fragmentation in the affected locality; permanent flooding of fishponds, lakes and creeks, which prevents the owners from harvesting them; a reduction of games and wildlife populations in the forest; and the blockage of communication/access routes among the neighboring communities (Environment Watch, 25/03/2002).

At the level of government, compliance with the EIA Act is nearly zero. Even when done, it becomes controversial as evidenced by the EIA report on the dredging of the River Niger. While the government is satisfied with the report and is poised to commence the project, the people consider the report to be "fraudulent". Their contention is that the EIA report does not assure them of adequate mitigating measures to safeguard the environment from possible disasters arising from the dredging of the river (Bayelsa State Ministry of Environment Report, 2000).

Similarly, state governments also pay lip service to the law. While they insist on EIA studies before projects are executed by the oil companies, they hardly do same. Thus, development projects of the states have impacted greatly on the Niger Delta environment. For example, a report of the Bayelsa State Ministry of Environment (2000) points out that the states arelosing River Nun Forest Reserve to Niger Delta University owned by the Bayelsa State government.

It is important to observe that the EIA law has some defects, which probably account for its ineffectiveness. First, some projects are excluded from mandatory EIA studies. Section 15, subsection 1 of the Act provides that where:

(i) In the opinion of the agency the project is in the list of projects which the President, Commander-In-Chief of the Armed Forces or the Council is of the opinion that the environmental effects of the project is likely to be minimal;
(ii) The project is to be carried out during national emergency for which temporary measures have been taken by the government.
(iii) The project is to be carried out in response to circumstances that in the opinion of the agency, the project is in the interest of public health or safety.

Subsection two emphasizes that:

> For greater certainty, where the federal, state or local government exercises power or performs a duty or function for the purpose of enabling projects to be carried out, an environmental

> assessment may not be required if – the project has been identified at the time the power is exercised or the duty or function is performed.

With regard to the mandatory study activities, the provisions are limited. For example, while land reclamation is a mandatory study activity, EIA is only required if the area under consideration is 50 hectares or more. The implication therefore is that where the area is less than 50 hectares, EIA study is not required.

Significantly however, the accumulation of the activities that are exempt from EIA studies can greatly degrade the environment. For example, as regards housing, EIA study is required if the area is more than 50 hectares. Thus, if a government develops houses in different locations, and the area is less than 50 hectares, it will not require study. Now, if we have 10 sites of 30 hectares, they will not require EIA study. Additionally, it is doubtful if developments less than 50 hectares will not create environmental problems.

The penalty for violating the provisions of the act is too little to deter offenders, particularly corporate bodies. Section 62 of the Act which deals with offence and penalty provides N100,000 fine or five years imprisonment for an individual offender, and a minimum of N1m for corporate offenders. Clearly, one million naira (N1,000,000) is too small a sum to compel corporate bodies (particularly the oil companies and governments) to obey the law.

It is significant to note that the enforcement of the EIA law lies with the Federal Ministry of Environment. The states only perform peripheral functions. This is clearly inappropriate as it largely excludes the regulatory institutions of stakeholder states in the projects for which EIA's are required (Environment Watch, 15/04/1998). A complaint at the state level is that the federal agency responds too slowly to their inputs, complaints and observations.

The local communities who are the hosts to projects for which EIA studies are undertaken are either not consulted, or not involved effectively in such studies. Thus, the benefit of involving the people, immense knowledge on the ecological process that can be integrated to enrich project design, team spirit that would elicit the commitment of stakeholders, and cooperation, is lost (Adibe and Essaghah, 1999:17-18). Thus, the EIA Act has done very little to protect the Niger Delta environment.

(b) **The Federal Environmental Protection Agency Act**

The Federal Environmental Protection Agency (FEPA), was created by Act No.58 of 1988, as part of the attempts by the Federal Government to implement appropriate projects designed to ameliorate ecological problems in the country. Section 4 of the Act, defines the functions of the agency as the "protection and development of the environment in general and environmental technology, including initiation of policy in relation to environmental research and technology."

The specific functions of the organization are spelt out by section 4 of the law as:

(i) Advise the federal government on national environmental policies and priorities and on scientific and technological activities affecting the environment;
(ii) Prepare periodic master-plans for the development of environment and technology and advise the federal government on the financial requirements for the implementation of such plans;
(iii) Promote co-operation in environmental science and technology with similar bodies, connected with the protection of the environment;
(iv) Cooperate with federal and state ministries, local government councils, statutory bodies and research agencies on matters and facilities relating to environmental protection; and
(v) To carry out such other activities as are necessary or expedient for the full discharge of the functions of the agency under this Act.

A significant feature of the FEPA law is the emphasis placed on pollution control and prohibition. Accordingly, section 20 prescribes penalties for the discharge of hazardous substances into the environment. Subsection 2 of section 20 prescribes N100,000 fine or 10 years imprisonment for an individual offender, while subsection 3 stipulates a fine not exceeding N500,000 and "an additional fine of N10,000 for everyday the offence subsists" for corporate offenders.

It is clear that the penalty is not stringent enough which probably explains the violation of the law, as evidenced by the

worsening environmental pollution in the Niger Delta area. This is also true of the "general penalties" as provided in section 35, which prescribes a maximum fine of N20,000 or a maximum 2 year imprisonment for individual offenders.

The literature on the Nigerian environment sees the FEPA law as the most serious attempt by the Federal Government to protect the Nigerian environment (Adibe and Essaghah 1999:86; Alapiki, 2004:244).

Thus, it is expected that the law would adequately and comprehensively address environmental problems in the Niger Delta area. However, this is not the case. Environmental issues such as indiscriminate logging, environment unfriendly agricultural practices (such as slope wise cultivation which promotes erosion), the use of dangerous chemicals for fishing, etc, are not covered by the act.

This demonstrates that the concentration of legislative power in the federal government has led to the promulgation of environmental laws which hardly take local condition into account. Again, even when provisions on the petroleum industry were made, they were not far-reaching. The only mention of the petroleum industry in section 23 of the Act states that:

> The Agency shall co-operate with the Ministry of Petroleum Resources (Petroleum Resources Department) for the removal of oil related pollutants discharge into the Nigerian

> environment and play such supportive role as the Ministry of Petroleum Resources (Petroleum Resources Department) may from time to time require from the agency.

Given the impact of the oil industry on the Niger Delta environment, this provision is clearly inadequate. Worse, the law created gaps that have been exploited by oil multinationals, to the disadvantage of the Niger Delta environment. One area where this is evident is the vague provision of section 36 of the Act. According to this section:

> When any offence against this Act or any regulations made there has been committed by a body corporate or by a member of a partnership or other firm or business, every director or officer of that body corporate or any member of the partnership or other person concerned with the management of such firm or business shall, on conviction, be liable to a fine not exceeding N500,000 for such offence and in addition shall be directed to pay compensation for any damage resulting from such breach thereof or to repair and restore the polluted environmental area to an acceptable level as approved by the Agency.

Having made this useful provision, the Act goes further to make a provision that "unless he proves to the satisfaction of the court that:

> (i) He used due diligence to secure compliance with the Act; and

(ii) Such offence was committed without his knowledge, consent or approval.

The later provision creates a very wide gap, which makes the law defective. It is exploited to avoid punishment to the detriment of the environment. Oil spillages and gas flaring that are not adequately dealt with by the law have induced environmental degradation, and undermined the development of local economies. See table two below:

Table 2

The Impact of the oil industry on the Niger Delta Environment

Activity		*Impact*
1	Exploration (a) Geophysical investigation	Destruction of vegetation, farmlands, human settlement. Clearing agricultural land and damaging the soil.
	(b) Geology survey	Disturbance of fauna and flora habitat.
	(c) Drilling	Accumulation of toxic waste material with the effect of: (i) Oil pollution of the land, sea or beaches. (ii) Pollution of underground water for plants.
2	Production processing (a) Flat and tank farms	Land pollution from long-term cumulative effects.

	(b) Gas flaring	Water and land pollution from sanitary waste, used lubricating oil and solid waste. (i) Air pollution from gas and oil processing evaporation and flaring. (ii) Killing of vegetation around the flare area. (iii) Production of heat. (iv) Suppressing the growth and flowering of some plants. (v) Reduces and diminishes agricultural production. (vi) Destruction of mangrove swamp and salt marsh.
	(c) Tanker loading locations	Spillage during loading operations with all its accompanying effects on the fauna and flora.
	(d) Storage depots	Land pollution from effluent waste and solid wastes of chemical cans and drums for the establishment of the storage depots.
	(e) Transportation	Destruction of farmlands and environmentally sensitive areas.
	(f) Refinery	Land pollution from effluent discharge, which contains wide

		range organic pollutants such as phenol hydrogen, sulfide, ammonia and gas.

Source: Federal Ministry of Housing and Environment, circular, 1983.

The major and pervasive impact of oil-related environmental problems is the drastic decrease in the nutrient value of the soil, the decrease in available land mass for cultivation (which has contributed to a decrease in the bush fallow period from 3-5 years to one year in many of the communities), the destruction of food, cash crops, and marine life which ultimately leads to a decline in agricultural output, and by extension, its development (Ibaba, 2005: 34). Gas flaring has equally reduced crop yield. For example, crop yields reduce by forty five percent within six hundred meters of gas flare site (Salau, 1993: 19). Also of significance here is the destruction of marine life. The particular importance of this lies with the fact that fishing constitutes the major occupation in many of the communities.

Furthermore, about 80 percent of protein food in the local communities is sourced through fish. What this means is that oil spillages have health implications. It has been established for instance that the polluted water (which serves not only as fishing grounds but is also as the only source of water for drinking and other domestic use) causes diseases in the communities. It stands to reason from the above that oil spillages worsen the health problems of the people, who grossly lack medical facilities. This exacerbates rural poverty, given that poor health reduces productivity.

(c) **Bayelsa State Environment and Development Planning Authority**

The Bayelsa State Environment and Development Planning Authority Edict was established for "the protection and development of the environment and biodiversity conservation and sustainable development of the State's natural resources" (Section, 6/i). Part seven of the Edict, which deals with offences and penalties, prohibits the following activities:

(i) Discharge of untreated waste;
(ii) Discharge of oil, grease or spill oil;
(iii) Discharge of injurious gas such as sulphur dioxide, oxides of nitrogen, hydrogen, sulphides, carbon, ammonia, chlorine, smoke, metallic dust and particles;
(iv) Storage of chemicals, oil, lubricants, petroleum products, cement (except for use in buildings), radioactive materials or gases in residential and commercial building (without the permission of the authority);
(v) Waste dumping without permission;
(vi) Dumping of toxic or hazardous matter without permission;
(vii) Indiscriminate sinking of well and borehole;
(viii) Use of chemical (Gamalin 20 or any herbicide or insecticide or other chemicals) to kill fish or destroy marine life in any river, stream, lake or pond within the state. (Section 30-39).

While the above provisions are not too different from those of FEPA, the last provision (prohibition of use of chemical in

rivers, etc) is significant. Being a state government law, it captured the local condition of the area, where chemicals are used for fishing in total disregard of the environmental cost.

However, the Edict failed to address the problem of logging, as it was not mentioned. This probably explains the indiscriminate logging, which has promoted deforestation in the state. The state loses 200,000 trees and 3 percent of its forest annually. (see table below).

Table 3

Timber Exploitation in Bayelsa State

S/N	Name of Species	Common Name	Volume of Wood Exploited (m3)
1	*Ceiba pentandra*	Cotton	528.57
2	*Symphonia globulifera*	-	167.34
3	*Alstonial boonei*	-	71.80
4	*Mytragyna ciliata*	Abura	40.15
5	*Pycnanthus argolensis*	-	30.13
6	*Nauclea diderishii*	Oppe	15.59
7	*Pterrocarpus Osun*	-	14.72
8	*Khaya invorensis*	Mahogany	11.43
9	*Lophira alata*	Ironwood	11.04
10	*Daniella ogae*	-	8.49
11	*Terminalia superba*	-	8.42

12	*Xylopia africana*	-	5.18
13	*Terminalia ivorensis*	-	3.82
14	*Sarcoglotti gabonensis*	-	1.66
15	*Euapacca guinensis*	-	1.61
	Total		**926.31**

Source: Bayelsa State Ministry of Environment, Forestry Department, 2000, p.1

The edict, like the FEPA Act, is characterized by gaps, which weaken enforcement. For example, while spillage and waste discharge attracts a N200,000 fine, in addition to the operator or owner of the facility being liable for:

(i) Any cost incurred by the state, local government or their agents in the abatement or removal of the discharge;

(ii) Any cost incurred by the state or local government in replacing any damaged facility or in restoring the ecology;

The Edict at the same time provides that the above will not be applicable if "the owner or operator of…facility can prove that a waste or spillage discharge was caused by a natural disaster or an act of war or by sabotage" (section 48/i). This may explain why many oil spills are now classified as "sabotage," by the oil companies.

Also of note is the general penalty for violating the provisions of the edict, which is a fine of N200,000, as against the N20,000 prescribed by the FEPA law. The state authorities are more

stringent than the federal authorities; perhaps because they (the state authorities) are close to the citizens who bear the direct burden of environmental degradation.

It is noteworthy that the law has suffered from "weak monitoring and enforcement capacity" (World Bank, 1995:57). The inadequate enforcement of the edict is attributable to the fact that some provisions of the law are not congruent with the customs of the people. A classic example is the provision in section 39, which prohibits the use of chemicals for fishing.

In Bayelsa State, the use of chemicals for fishing was prohibited by customary law even before the Environment Protection Edict came into force. However, this was predicated on a customary practice where families and communities owned creeks, lakes or rivers. Accordingly, such owners enforced the law. However, the state edict is based on the ownership of these creeks, lakes and rivers by the state. Because the laws conflict with custom and tradition, they have been ignored by the people (Environment Watch, 15/12/2001)

What is discernible from the above is that the Bayelsa State Environment Protection Law has failed to achieve its objective – sustainable development in the state. For example, the use of chemicals for fishing is widespread in the state. The chemicals lead to a destruction of marine life. Meaning while, fishing is a major occupation (second to farming, the dominant occupation) and about 80% of protein food in the local communities is sourced from fish.

(d) **Delta State Environmental Protection Agency (DELSEPA) Edict**

The Delta State Environmental Protection Agency (DELSEPA) was created for "the protection and development of the environment in general and environmental technology, including initiation of policy in relation to environmental research and technology, planning, design and construction of ecological and environmental facilities."

The provisions of the DELSEPA Edict were virtually the same as those in FEPA. It placed emphasis on pollution control and prohibition. The areas it essentially focused on are "prevention of industrial pollution," "on-shore or off-shore discharge of waste," and the use of "chemicals for fishing and farming." Similar to the Bayelsa State Environmental Law, it responded to local conditions by outlawing the use of chemicals for fishing.

Section 34 of the edict states that: "except such as approved by the Federal or State authorities for the purpose, the use of any chemical substance by any person or body whether corporate or incorporate for fishing or farming purposes shall be no offence." However, it failed to address the problem of logging and deforestation.

Again, like the other environmental laws earlier discussed, the penalty for violating the edict is too little. Section 41 stipulates a N24,000.00 or one year imprisonment for individual offenders; while section 40 prescribes N500,000 for corporate offenders. It further provides for remediation of impacted areas. The above provision is however not applicable if there

is proof that the violation was "solely caused by a natural disaster or an act of sabotage." Here again, gaps are created which are then exploited to weaken the effectiveness of the law.

The DELSEPA Edict failed to effectively protect the Delta State Environment. Its provisions are not far reaching. For example, it did not spell out environmental standards for the oil and gas industry. This perhaps is attributable to the fact that it is limited by the FEPA law. In all, the evidence of its ineffectiveness is conspicuous in the state (indiscriminate dumping of wastes, fishing with outlawed chemicals, etc).

The reasons for the ineffective execution of the Delta State Environmental Protection Law are not different from the ones earlier highlighted. However, the law places too much emphasis on revenue derivable from environmental sanitation offences and effluent discharge fees, as against the tackling of the adverse environmental problems plaguing the state.

Conclusion

The World Commission on Environment and Development (WCED) brought to the fore the need to balance development and its cost to the environment; thus making "sustainable development a global concern. In Nigeria, the enthronement of "sustainable development" is a national objective that is highly ranked.

To this end, state legislation on the environment has become a major instrument in the quest for sustainable development.

Essentially, the laws seek to correct acts and attitudes which degrade the environment, and at the same time guide and control natural resource exploitation. This paper viewed and analyzed the impact of these environmental legislations on the promotion of sustainable development in the Niger Delta.

This paper notes that Nigeria's environmental protection laws (at Federal and State levels) are largely ineffective. This paper blames this on the lack of enforcement of the legislation, which results from to the privatization of the State and the consequential neglect of the environment.

The provisions of the laws create gaps, which weaken enforcement. For example, the Petroleum Act, which regulates operations of the oil industry, prescribes no penalty for offenders. Similarly, the FEPA Act only prescribes a N20,000 fine.

Again, given the nature of Nigerian Federalism, legislative powers are concentrated in the central government which provides the framework for environmental legislation. Accordingly, the environmental protection laws are largely out of sync with local conditions. To this end, they are ignored. It is clear that environment laws have failed to protect the environment. Probably for this reason, the government has just established the National Environmental Standards Regulation Enforcement Agency (NESREA).

Meanwhile, the effectiveness of the laws has impeded sustainable development of the Niger Delta region. On the way forward, this paper sees as the most likely option the

institution of good governance (at all levels of government) as the most likely option: a government that is predicated on transparency, accountability, frugality in the management of national resources, sincerity, discipline and commitment to national development objectives.

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