

COURSE CODE:	EMT 501
COURSE TITLE:	Environmental Law
NUMBER OF UNITS:	2 Units
COURSE DURATION:	2 hours per week

COURSE DETAILS:

Course Coordinator:	Dr Babatunde Saheed Bada
Email:	badabs@unaab.edu.ng
Office Location:	COLERM
Other Lecturers:	

COURSE CONTENT:

Basic concept of environmental standard criteria and regulation. Federal environmental laws organisation. Regulations and enforcement mechanisms, violations and sanctions. Comparative study of environmental laws in some advance countries e.g. USA, Canada, Thailand etc. International laws and conventions.

COURSE REQUIREMENTS:

This is a compulsory course for all level students in the Department. It is compulsory that students should participate in all the course activities and have minimum of 75% attendance in order to be qualify to write the final examination.

READING LIST:

1. Margaret T. Okorodudu-Fubara. 1998. Law of Environmental Protection

LECTURE NOTES

HISTORY OF ENVIRONMENTAL LAW

The environment is the complex of physical, chemical and biological factors and processes which sustain life. Man is part of this network of natural components which make up the planetary ecosystem. Science and history has both agreed that before the advent of man the environment is already in existence. Thus, the environment preceded human, technological and scientific development activities. It may be rightly postulated that this environment before the advent of man was pure and unpolluted; man therefore inherited a perfect environment void of pollution.

Man is the greatest agent of environmental change. Man has changed his environment by building highways, airports, straightening river channels, industrializing urban and rural areas, dumping toxic wastes in rivers and oceans, burning refuse in open air, setting bushes and forest on fire e.t.c. Man has engaged in activities which have altered the biological, geographical, physical, geological and chemical cycles upon which life depends.

More so, unregulated population growth otherwise called population explosion complicates environmental problems; it increases ecological balances, depletes natural resources and worsens the accumulation of obnoxious wastes. Poverty has been another factor that drives the developing nation into the mystery of earth's excessive exploitation. The present economy situation of the third world nation is the result of low levels of development. The social and economy situation in the underdevelopment nation worsen, **GNP** per capital decreased and the amount of foreign trade was only 1% of the world trade. In addition, these countries (i.e. 3rd world countries) contain and produce the main portion of the world's energy and raw materials, three-fourths of the oil supply, one-third to one-half of the world's most important non-ferrous metals and many other minerals, they only utilize a small portion of their wealth for themselves. Most of the materials satisfy the needs of the developed countries for energy and raw materials. Thus, the reasons for the negative reactions of most 3rd world countries to the sudden emergence

of the spirit of environmentalism which was one of suspicion. Thus, bias opinion was thrown in the air while the need for the conservation of the environment was embraced due to the bitter experience witnessed due to environmental degradation. However,

1. The surge in environmental legislation between 1950 and 1970 appears to have been succeeded by a more measured process from 1970 onwards in which the character of the legislation has changed to bring about a more integrated and cross-sectoral series of policies and increasingly to apply within the territory of individual countries internal obligations entered into on a regional or global basis. Much national environmental law has been concerned with regulating activities that have the potential to cause environmental hazard – such regulations concern, for example, the containment of toxic substances in storage, in use and in transportation, the authorization of discharges to the environment (which normally require specific permits from an appropriate control authority), and the setting of standards for emissions, which must be met either by point sources of emission or by motor vehicles, aircraft and other emitters. Another whole dimension of law and regulation is concerned with standards for manufacture products ranging from vehicles and aircraft through to consumer goods.
2. There has been a major evolution of environmental law in the industrialized countries between 1970 and 1990.

The concept of integrating the environment and development is now universally recognized. It emanated in response to the concern expressed during the last decades by developing countries that environmental requirements would hinder economy development which for these countries constitute an overriding priority. The need for integrating of the two aims is expressed through the notion of sustainable development defined by World Commission on Environmental and Development (WCED). However, without the enactment, enforcement and implementation of environmental law the road to achieving sustainable development would

be proactive. Therefore, it is clear that environmental law and regulation is development on scientific understanding and the continuous development of new techniques of assessing the quality of human development.

ENVIRONMENTAL PROVISION IN THE HISTORY OF NIGERIAN CONSTITUTION

The world has moved far away from the era when it was believed that the only right which a government is called upon to guarantee and protect is the natural rights of man. By living in nation-states and in organized communities, man has acquired new rights which are now regarded, by many civilized countries, just as inalienable as those rights with which nature endows him at birth. The rights to education and work are among such rights. Increasingly important in some countries is the addition of the right to decent and healthy environment to these newly acquired rights..

In the history of Nigerian constitutional development for instance Clifford Constitution of 1922, the Richards Constitution of 1946, the Lytleton Constitution of 1951, the Macpherson Constitution of 1954, the Independence Constitution of 1960, the 1963 Republican Constitution, the 1979 Constitution of the Federal Republic of Nigeria, the aborted 1989 Constitution of the Federal Republic of Nigeria, the 1999 Constitution of the Federal Republic of Nigeria. Unfortunately, throughout the history of Nigeria's Constitutional development, the first time, though indirect, that constitutional provisions on environment were entrenched into Nigerian constitution was in 1979. Some sections of the 1979 Constitution relevant to the preservation and protection of the environment were:

Section 4 of the **1979** constitution vests the power to make laws for the federation on the National Assembly which shall:

(2)... have power to make laws for the maintenance of law, order and good governance of the federation or any part thereof with respect to any matter included in the Exclusive List set out in Part 1 of the Second schedule to this constitution.

(4) In addition and without prejudice to the powers conferred by subsection (2) of this section, the National Assembly shall have power to make laws with respect to the following matters, that is to say:

- (a) Any matter in the concurrent Legislative List set out in the first column of Part ii of the second schedule to the constitution to the extent prescribed in the second column opposite thereto, and
- (b) Any other matter with respect to which it is empowered to make law in accordance with the provisions of the constitution.

Items on the Exclusive List which are relevant to the environment includes aviation, drugs and poisons, fishing and fisheries in the territorial waters and exclusive economic zone of Nigeria, maritime shipping and navigation on tidal waters and Rivers Niger and its effluents, meteorology, mines, minerals including oil fields, oil mining, geological survey and natural gas, national parks, nuclear energy, quarantine and water from sources deemed by the National Assembly to affect more than one state. On the other hand, items on the concurrent list relevant to the environment are antiquities, monuments and archives, electrical power, industrial, commercial and agricultural development and scientific and technological research.

In order not to be left out of the recent global trend on constitutional entrenchment of the right to a decent and healthy environment, direct constitutional environmental provision has been made in the 1999 Constitution.

Chapter 2 of the 1999 Constitution on Fundamental Objectives and Directive Principles of State Policy lays down policies that should be pursued in order to realise the nation ideals. Of particular relevance to environmental protection and preservation are section **16 (2)**, section **17 (3)** and section **20**.

Section 16 (2) provides as follows:

The state shall direct its policy towards ensuring:

- (a) The promotion of a planned and balanced economic development;

- (b) That the material resources of the nation are harnessed and distributed as best as possible to serve the common good;
- (c) That suitable and adequate shelter, suitable and adequate food, reasonable minimum living wage, old age care and pensions, and unemployment, sick benefit and welfare of the disabled are provided for all citizens.

Section 17 (3) provides as follows:

The state shall direct its policy towards ensuring that:

- (a) All citizens, without discrimination on any group whatsoever, have the opportunity for security adequate means of livelihood as well as adequate opportunity to secure suitable employment;
- (b) Conditions of work are just and humane, and that there are adequate facilities for leisure and for social, religions and cultural life;
- (c) The health and safety and welfare of all persons in employment are safeguarded and not endangered or abused;
- (d) Children, young persons and the aged are protected against any exploitation whatsoever, and against moral and material neglect;
- (e) The evolution and promotion of family life is encouraged.

Section 20 of the **1999** Constitution directly provides thus:

“The State shall protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria”.

In order to enhance the effectiveness and observance of above provisions by all organs of government, authorities and persons, **section 13 of the 1999** constitution provides as follows:

It shall be the duty and responsibility of all organs of government and of all Authorities and person, exercising legislative, executive or judicial power to conform to observe and apply the provision of this chapter of the constitution.

MODERN FRAMEWOK OF ENVIRONMENTAL PROTECTION LAWS

The first serious and action oriented conference on the issue of the environment in this country was held in September, 1988 and the outcome of that conference led to the enactment of **Federal Environmental Protection Agency (FEPA) Decree, 1988, Decree No. 58** which established the FEPA with a view to establishing the basic institutional machinery for environmental management in Nigeria.

A month prior to this, the then Federal Military Government had enacted the **Harmful Wastes (Special Criminal Provision e.tc.) Decree, 1988, Decree No. 42** in swift response to the dumping of toxic waste at the koko port, (Delta State) and with the objective of prohibiting the carrying, depositing and dumping of harmful waste on any land, territorial waters, contiguous zone, Exclusive Economic Zone of Nigeria, or its inland waterways and prescribing severe penalties for any person found guilty of these crimes.

The promulgation of these two decrees was followed by official release of the **National Policy on the Environmental in 1989** with the goal of sustainable development in the country. The Environmental Impact Assessment (EIA) Decree No. 86 of 1992 was made by FEPA.

The purposes of the FEPA decree are primarily twofold; first, the establishment of the FEPA and second, the provision of a legal foundation essential for the realization of the National Policy on the environment.

Part 1 of the decree establishes the FEPA, its stated functions and powers.

Part 2 provides for the setting of National standards applicable to the respective environmental media, viz; water, land air, noise and hazardous substances.

Part 3 establishes State and Local Government Environmental Protection Bodies

Part 4 deals with the enforcement powers of the Agency and general penalties for violation of any provisions of the decree or any regulation made pursuant thereto.

NATIONAL ENVIRONMENTAL PROTECTION STANDARD

(i) Air

By virtue of **section 17** of the FEPA Decree, the agency shall establish more criteria, guidelines, specifications and standards to protect and enhance the quality of the nation's air resources.

Moreover, FEPA is mandated to give particular attention to:

- minimum essential air quality standards for human, animal or plant health;
- the control of concentration of substances in the air which separately or in combination are likely to result in damage or deterioration of property or of human, animal or plant health;
- the most appropriate means to prevent and combat forms of atmospheric pollution;
- controls of atmospheric pollution originating from energy sources, including that produced by aircraft and other self propelled vehicles and in factories and power generating stations;
- standards applicable to emission from any new mobile source which in the Agency's judgment causes or contributes to air pollution which may reasonably be anticipated to endanger public health or welfare; and
- the use of appropriate means to reduce emission to permissible levels.

Under **sections 17 (2)**, the agency may establish monitoring stations or networks to locate sources of atmospheric pollution and determine their actual or potential danger.

(ii) Land / Forests

It is a notorious fact that over 90% of industries in the country dispose of hazardous waste within the factory premises and quite often unto near by land, streams and rivers.

Section 20 (1) of the FEPA decree prohibits the discharge of harmful substances upon the nation's land. In accordance with subsection (5) of section 20, FEPA has issued regulations, listing substances which are regarded as hazardous substances.

The Harmful Wastes Decree also contains relevant provisions for the protection of the nation's land resources from the adverse effect of hazardous chemicals on the soil, by expressly prohibiting the dumping of hazardous waste on the territorial lands and waters of Nigeria without lawful authority.

(iii) Water

The FEPA Decree calls for the establishment of water quality standards **section 15 (1)** "for the inter-state waters of Nigeria to protect the public health or welfare and enhance the quality of water". In establishing such standards, FEPA must "take into consideration the use and value for public water supplies, propagation of fish and wildlife, recreational purposes, agricultural, industrial and other legitimate uses; thus establishing different water quality standards for different uses".

In consonance with its powers under **section 5 (9) of the FEPA Decree, in 1991**, the Agency first issued the National Guidelines and Standards for Industrial Effluents, Gaseous Emissions and Hazardous Waste Management in Nigeria. Sequel to this, in accordance with **section 16**, of the decree authorizing the Agency to establish effluent limitations for new point sources and existing point sources. FEPA issued the National Environmental Protection (Effluent Limitations) Regulations, 1991. This regulation is aimed at

- (a) encouraging industries to install anti-pollution equipment for the detoxification of effluent and chemical discharges emanating from the industry, and
- (b) requiring industries which discharge effluents to treat such effluents to the prescribed uniform level in order to ensure assimilation by the receiving water into which the effluent is discharged.

(iv) Noise

Under **Section 19** of the FEPA Decree the agency is required to:

(a) identify major noise sources, noise criteria and noise control technology

(b) establish noise abatement programmes and noise emission standards as it may determine necessary to preserve and maintain public health or welfare. The Agency is also expected to make recommendations to control noise originating from industrial, commercial, domestic, sports, recreational, transportation or other similar activities.

ENFORCEMENT OF ENVIRONMENTAL PROTECTION LAWS

(1) Criminal Prosecution:

Section 1 (2) of the Harmful Waste Decree states that any person who engages in any of the prohibited activities (without lawful authority) “shall be guilty of a crime under this decree” and in accordance with **section 6**, any person found guilty of said crime shall on conviction be sentenced to imprisonment for life. Besides the life imprisonment prescribed by the Harmful Waste Decree, under the FEPA Decree, a term of imprisonment not exceeding **₦100,000** is stipulated for an offender convicted under the FEPA Decree. By virtue of **section 20 (3)** of the FEPA Decree, where the violator of **section 20 (1)** “which prohibits the discharge of harmful or hazardous substance into the air, water or land is a body corporate, the latter shall on conviction be liable to a fine not exceeding **₦500,000** and an additional fine of **₦1,000** for everyday the offence subsists.

(2) Inspection and Searches:

This enforcement device is perhaps the most crucial within the legal framework for the protection of the environment. It is the most useful in a sense, in that it is preventive in essence. While most of the other enforcement devices are set in motion after violation of the applicable status i.e. after harm had been done to the environment, usually, the power to inspect may be applied before such incident. Indeed the power to inspect is designed to ensure that the law is

obeyed and that what need to be done are done properly. **Section 25** of the FEPA, 1988 provides that: “For the purposes of enforcing this Decree, any authorized officer may, without warrant:

- (a) require to be produced, examine and take copies of, any licence, permit, certificate or other document required under this Decree or any regulations made thereunder;
- (b) require to be produced and examine any appliance, device or other items used in relation to environmental protection.

The power to search is often employed where there is suspected violation of the law. Under **section 26** of the FEPA Decree, where an authorized officer has reasonable grounds to believe that an offence has been committed contrary to the decree or any regulations made thereunder, he may without a warrant enter and search any land, building, vehicle, tent, floating craft on any inland water or other structure whatsoever, in which he has reason to believe that an offence against the decree or any regulations made thereunder has been committed. Similarly under **section 10** of Harmful Waste Decree, any police officer may without warrant enter and search any land, building or carrier, including aircraft, vehicle, container or any other thing whatsoever which he has reason to believe is related to the commission of a crime under the said decree.

(3) Sealing, Seizure and Forfeiture:

Under **section 11** of the Harmful Waste Decree, the Director General of FEPA is empowered to seal up any area or site which has been or is being or will or might be used directly or indirectly for the purpose of depositing or dumping any harmful waste. However, the power to seal up the dump site is a temporary measure. This could last for 3 months in the first instance and may be extended for a period not exceeding 12 months. In the interim, the FEPA boss may direct that any substance found therein which in his opinion is of a harmful nature be destroyed or disposed of at such time and in such manner as he deems fit furthermore, FEPA may take necessary measures to safeguard lives or property within the sealed up site.

The power to seize is empowered under both the Harmful Waste Decree and the FEPA Decree.

The authorised law enforcement agent under the respective statutes is empowered to seize any

item or substance which he has reason to believe has been used in the commission of a crime under the particular decree.

The device of forfeiture to enforce environmental protection statute is provided for under **section 6 of the Harmful Waste Decree**, for instance, stating:

“Any person found guilty of crime (under this Decree) shall on conviction be sentenced to imprisonment for life, and in addition: (a) any carrier, including aircraft, vehicle, container and any other thing whatsoever used in the transportation or importation of the harmful waste; and (b) any land on which the harmful waste was deposited or dumped shall be forfeited and vest in the Federal Government

(4) Arrest:

This enforcement device is common to virtually all the environmental protection statutes. The power is given to an authorised enforcement agent to arrest person who he has reason to believe has committed an offence under the particular law for the purpose of holding or detaining him to answer to a criminal charge or civil demand arising under the said law.

(5) Permit, Licence and Certificate:

This is another salient enforcement device employed under the FEPA regulations issued pursuant to the FEPA Decree. The technique occupies a very important position within the overall network of environmental protection management. This is because the government can use the issued permit, licence or certificate as monitoring devices to regulate those activities which are potential sources or factors which may cause environmental pollution. The issuance of a permit, licence or certificate carries with it an understanding that the holder of such as the case may be, shall forfeit same (or get a warning prior to forfeiture) upon a breach of the regulations or laws on the basis of which the permit, licence or certificate was issued in the first instance.

NIGERIA ENVIRONMENTAL PROBLEMS AND NATIONAL POLICY ON THE ENVIRONMENT (1989)

Environmental problems

- Air Pollution
- Waste generation
- Soil Erosion
- Drought and desertification
- Oil and gas pollution
- Flooding
- Biodiversity loss

Measures in the National Policy

The detailed implementation strategies for the various sectors are as follows:

- The Human Population
- Land-Use and Soil Conservation
- Water Resources Management
- Forestry, Wildlife and Protected Areas
- Marine and Coastal Area Resources
- Sanitation and Waste Management
- Toxic and Hazardous Substances
- Agricultural Chemicals
- Air Pollution
- Working Environment (Occupational Health and Safety)

CIVIL AND CRIMINAL LIABILITY FOR ENVIRONMENTAL OIL POLLUTION DEGRADATION IN NIGERIA

Civil Liability (Plaintiff and Defendant)

The environmental degradation in Nigeria is a virtually in all aspects but in this paper the primary focus here is to look at the civil liability that exist for such environmental degradation occasioned by oil pollution.

CAUSES OF OIL POLLUTION

The problem of oil pollution in Nigeria is basically associated with the activities of oil companies in the exploration and production stages with emphasis on the following:

- (a) Failure along flow lines which causes leaks;
- (b) Over pressure failure;
- (c) Sabotage to well heads and flow lines;
- (d) Hose failure on loading systems;
- (e) Failure along pump discharge system.

Oil pollution will also arise in a situation where militant youths particularly in the Niger-Delta deliberately and maliciously sabotage oil pipelines in order to put forward their grievances.

Nonetheless, there are civil remedies available to an individual or a community whose property or environment has been ravaged by oil pollution.

NEGLIGENCE

The most obvious common law rule that would be applicable for a victim of an oil spill would be the principle enumerated in the tort of Negligence. This tort was given universal recognition in the famous case of Donoghue Verse Stevenson – Here; **LORD WRIGHT** defined negligence as follows:

“In strict legal analysis, negligence means more than heedless or careless conduct, whether in omission or commission. It properly connotes the complex concept of duty, breach, and damage thereby suffered by the person to whom the duty was owing”.

To succeed in an action for negligence, the plaintiff must prove three things:

- (1) He must prove to the court’s satisfaction that the defendant (in this case the oil company) owed him a duty of care;
- (2) The plaintiff must show that the defendant was in breach of that duty of care;
- (3) The plaintiff must show that the damage suffered was caused by the defendant’s breach of duty.

The plaintiff must show that there was a duty incumbent on the defendant oil company to conform to the required legal standard, and that this was lacking. In the case of Chief Simon Onajoke Verse Seismograph Services Limited – the trial judge in coming to the conclusion that the defendant had breached the duty of care said:

“The defendant carried out the said operation without precaution to avoid causing damage and in my view liable in negligence”.

Finally, for the plaintiff to succeed in an action in negligence, he must show a link between the breach by the defendant’s duty of care and the harm done. In Atubin and Others Verse Shell B. P. Development Company of Nigeria – the plaintiff claimed that the defendant caused crude oil, gas and other chemicals to escape from their pipelines which was under their control, thereby destroyed the fishes in their lakes and farmlands. The plaintiff further claimed that the escape destroyed their economic trees and made their water unfit for human consumption. It was held that as the plaintiff could not show that the negligence of the defendant was the proximate cause of the damage, the action in negligence therefore failed.

THE PRINCIPLE IN RYLANDS VERSE FLETCHER

Another civil remedy available to the victim of an oil spill will be found in the principles of Rylands Verse Fletcher. This rule lays down the doctrine of strict liability. It was laid down as far as 1866 when BLACKBURN J. said:

“The person who for his own purpose brings on his land and collects there anything likely to do mischief if it escapes, must keep it at his peril, and if he does not do so, is prima facie answerable for all the damage which is the natural consequence of its escape”.

For the above rule to apply, the plaintiff must establish that there was an escape of something which was intrinsically dangerous and which was under the control of the defendant while using land in a non-natural user. The phrase-non-natural user – may be loosely defined as the usage of land in an extra-ordinary manner. If it brings with it increased risks to others, then such usage may be a non-natural user of land. In Chief Ojukwu and Others Verse Shell B. P. Development company of Nigeria, the court had to make a pronouncement on Non-Natural User of Land. In that case oil from the defendant’s manifold overflowed and spilled, thereby causing damage to the plaintiff’s fishing nets, vegetation, drinking water and juju shrine. ICHOKU J. held that since the manifold was placed on land, it would therefore constitute a Non-Natural User of Land. A learned writer, O.A. Adewale in his article “Judicial attitude to environmental Hazards in the petroleum industry” has charged that the term Natural user of land should be elastic and must vacillate with the circumstances, the period and the economic conditions prevalent at the time. He went on to say further that:

“The judiciary should reconsider its application of the rule to hazardous cases in the petroleum industry... Petroleum operations should not be considered a Non-Natural user of land... because; Nigeria derives the bulk of her revenue and foreign earnings from oil”.

The above statement if anything has pushed the victims of oil pollution into a very weak corner in the face of daily, environmental degradation in this country. Must we say that because the oil industry presently accounts for 90% of our National Income, then all acts of pollution by the oil

industry should be ignored? Another premises for faulting the argument of the learned author would be the seemingly subtle attempts he made in glorifying monopoly capital to the detriment of a sustainable environment.

NUISANCE

Another tort that is heavily relied upon by victims of oil pollution is the tort of nuisance. It is a tort of inconvenience from which damage results. At law, there is public nuisance which basically is a crime; and private nuisance which civil in nature. A private individual can maintain his action in nuisance by fulfilling the conditions imposed by the law. Where the plaintiff rests his case in a private nuisance, he has to seas that there was a substantial interference with his enjoyment of land. Nuisance occurs where oil is spilled irrespective of negligence, thereby causing injury to property or interfering with a plaintiff's use or enjoyment of his land. What the law of Nuisance does is not to stop you from using your land; rather it is to ensure that the usage does not necessarily disturb another. In Amos Verse Shell B.P. Development Company of Nigeria – the court held that the blocking of the stream was public Nuisance because the Creek was a public water way. Any individual could therefore not recover damages for public nuisance unless there is a proof that he has suffered over and above everybody else.

RES IPSA LOQUITUR: This simply means “the facts speak for themselves. When oil spillage occurs, it is always there for all to see. The damage done is ever staring man on the face. So, there is nothing to hide. This doctrine was stated by ERLE C.J. in the case of Scott Verse London and St. Katherine Dock Company. His Lordship said:

“Where the thing is shown to be under the management of a defendant... and the accident is such as in the ordinary cause of things do not happen if those who have the management use proper care, it affords reasonable evidence in the absence of explanation by the defendant that the accident arose from want to care”.

The principle shifts the (burden of proof) onus of proof to the defendant since as a matter of practice, technical details of his operations are only known to him. In the case of Victor Elem Verse Shell B.P. Development Company Limited, the trial judge evoked the above principle and awarded damages to the plaintiff.

INJUNCTION

Injunction is yet another remedy available to victims of oil pollution. A community may apply for the opportunity offered by the equitable remedy of injunction to restrain the defendants from the continued degradation of the environment. But the Nigerian courts are indeed very reluctant to grant injunction to an oil company from further production for the mere reason that the country earns its foreign exchange from it. In Allar Iron Shell B.P. Limited, the plaintiff requested the court to grant him an injunction to refrain the defendants from further polluting his creek and fish pond. The court flatly denies the prayer for injunction on the grounds that mineral oil is the mainstay of this country's revenue. The common man's hope for justice is often dashed.

JUDICIAL ATTITUDE TO ENVIRONMENTAL HAZARDS IN NIGERIA

It has been observed that where victims of oil pollution manage to prove that the oil companies were negligent in their activities, the award of damage by the courts to such victims is in the best of times, paltry. This is not considered enough to serve as deterrent from pollution of the environment.

In conclusion, it is suggested that the Law courts impose stiffer penalties than is presently being done to stem the tide of environmental degradation in this country in particular and the world at large. If this devastating phenomenon is not arrested, the earth may be faced with imminent total destruction and the creatures therein extinct.

CRIMINAL LIABILITY

As it is customary, this appraisal will start with a contextual definition. A person is said to be criminally liable when the offence committed is one that is enforceable by the State though committed against another individual or a thing which the State is protecting. Also, an individual can enforce a criminal act against him/her where a fiat issued by the Attorney-General is granted in which case the person suing will now engage a private legal practitioner as opposed to the State counsel who would have prosecuted the action had it been left to the State.

It must be noted that environmental crimes in Nigeria dates back to 1915 when the Nigerian colonial masters, by virtue of the Water Works Acts of 1915, made it a criminal offence to foul the water ways of Nigeria. The Criminal Code contains few general provisions relating to fouling Nigeria Water (S.245) and noxious acts (S.257). The oil in Navigable Water Act of 1968 makes it an offence for anyone to discharge oil into Nigerian water. Despite the existence of these legislation, the various level of government did not attached seriousness to environmental offences until 1988 when the Harmful Waste (Special Criminal Provisions, etc). Decree No.42 of 1988 was promulgated. In discussing this topic, three legislations will be reviewed. There are: -

- (1) Harmful Waste (Special Criminal Provisions, etc). Decree No. 42 of 1988
- (2) The Federal Environmental Protection Agency Act, cap. 131 Law of Federation Nigeria;
and
- (3) The Environmental Impact Assessment Act 1992.

As a starting point the Harmful Waste (Special Criminal Provisions, etc). Decree No. 42 of 1988 shall be highlighted. Prior to 1988, there was no existing Federal Law that seeks to control the importation or otherwise of hazardous wastes. In that year, an Italian firm imported toxic waste into the country and dumped same at Koko in Delta State which woke the erstwhile sleeping military regime over such issues and to promulgate the Decree No. 42 of 1988 to protect the country from the dangers to toxic waste dumping. The Harmful Waste (Special Criminal

Provisions, etc). Decree No. 42 of 1988 is the first Federal Government Legislative control action on hazardous waste, is to send a hard message across to those Nigerians and their overseas hazardous waste business partners, that henceforth the territorial land and waters of Nigeria are “NO-DUMP ZONE”, by prohibiting all activities relating to the purchase, sale, importation, transit, transportation, deposit and storage of harmful waste without lawful authority. As a show of seriousness, the decree prescribes a penalty of life imprisonment in addition to forfeiture of any aircraft, ship, vehicle, containers, land, etc, used in connection with the prohibited activities relating to harmful waste, for anyone found guilty. This radical reaction by the government was informed by the dangers inherent in such wastes.

TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTE: THE DILEMMA OF DEVELOPING COUNTRIES

Introduction

Disposing through transboundary movement of an increasing volume of hazardous wastes has in recent years become a global concern. Virtually all-industrial activity generates waste, which is discarded because it seems to have no further economic use.

However, as industrialized countries have tightened their controls over the movement and disposal of hazardous waste, illegal dumping and traffic has increased.

In the late 1980s, a series of scandals came to light, involving hazardous waste dumping in developing countries. Recent examples include 1500 tones of industrial incinerator ash from Philadelphia, USA dumped on the Guinea Island of Kassa, up to 4,000 tones of chemical waste from Italy were dumped in the port of koko in Nigeria. The latter incidence served as a case study in this paper.

DEFINITIONS AND CLASSIFICATION OF HAZARDOUS WASTES

The draft global convention on the transboundary movement of hazardous wastes defines waste as “a substance or objects which are disposed of or are intended to be disposed of or are required to be disposed of by the provisions of national laws”.

Certain wastes are defined as “hazardous” a term that has been used differently in different countries. In United States of American, for example, wastes are defined as hazardous if they may cause or significantly contribute to an increase in mortality or in serious irreversible or incapacitating reversible illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of or otherwise use.

According to the Resource Source Conservation and Recovery Act (**RCRA**), 1976 statute defined hazardous waste as “any solid waste or combination of solid waste that because of its quantity, concentration, physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, or pose a substantial present or potential hazard to human health or environment when improperly managed.

Therefore, transboundary movement of hazardous waste refers to the illegal transport of waste across borders. In recent years, developed country industries have resorted to exporting hazardous waste for disposal in third world countries, after national regulations have been tightened up nearer home. In some cases, the dumping is the result of legal contracts by Third world companies or governments accepting waste from companies in the industrialized countries in exchange for hard cash.

CLASSIFICATION

There are different approaches to hazardous waste classification. The European countries have adopted the EEC list of generic wastes, as set out in the 1978 Toxic and Dangerous Waste Directive, but the UK uses supplementary requirements that have the effects of de-listing a particular waste if it passes certain test criteria, e.g. for toxicity.

The USA also has an inclusive list, but if an item does not appear on the EPA’s published lists the waste must be tested for three designated characteristics of hazardousness: ignitability corrosively and toxicity. Thus the threshold tests are used to regulate waste.

DEVELOPING COUNTRIES AND HAZARDOUS WASTE TRADE

A: FACTORS RESPONSIBLE FOR WASTE EXPORTATION IN DEVELOPING COUNTRIES

- (1) Cost of complying with environmental laws in developed countries.
- (2) Shortage of dumpsites in some places
- (3) A curious self-centered motive to protect their own lives and welfare at the expenses of others are some of the obvious but un-spelt reasons for the targeting of developing countries in Africa and Asia by the developed countries as dumpsites for the disposal of their toxic waste, knowing fully well that these developing countries do not have the technological capability to handle the treatments of final disposal of such wastes.

Some of these developing countries, gullible or desperately in need of foreign exchange became victims as dumpsites for the unwanted toxic industrial leftovers from the advanced nations. Some others become victims as a result of unscrupulous conduct of their own citizens who took advantage of the taxed laws and engaged in the nefarious toxic waste deals with foreign business partners.

Environmental acceptable management of hazardous waste and other wastes is taking all practicable steps to ensure that hazardous wastes or other wastes are managed in a manner which will protect human health and the environmental against the adverse effects which may result from such waste.

Since 1989, industrialized nations have legally exported an estimated five million tons of hazardous waste. The primary motivation for exporting this hazardous waste is economic. For instance, nations such as Guinea-Bissau in West Africa are willing to dispose of hazardous waste for as little as \$40 per ton.

The financial incentives for accepting hazardous waste from abroad can be very great for cast-poor developing nations. In 1998, for example, the West Africa nation of Guinea Bissau signed a five year, \$600 million contract with a group of European tanneries and pharmaceutical

companies to dispose of fifteen million tons of toxic waste under the terms of the contract, the Europeans would have paid Guinea-Bissau \$120 million a year, an amount equal to eighty per cent (80%) of the small nation's gross national product. The staggering amount of money may have clouded the judgement of the Guinea Bissau government regarding its citizen's best interests.

The contract between the European companies and Guinea Bissau was never enforced because public outrage within Guinea-Bissau over the agreement forced its government to terminate the contract. The dilemma facing Guinea-Bissau and similarly situated developing nations is a difficult one because it is forcing other countries to choose between poverty and poison.

Another problem with exporting waste is that many countries that receive waste do not know what is in it, do not know how toxic the materials really are, and do not have facilities to store it or dispose of it properly.

In March 1988, a Norwegian freighter arrived on the Africa West coast to deliver a cargo listed as "raw materials for bricks". A Guinea concrete manufacturer had purchased the material to build roads and cinder blocks, but, bricks made from it crumbled in the hands of labourers and trees near piles where the materials were stored died.

Researchers studying West African estimates that in 1988 more than 22 metric tons of hazardous wastes were imported.

KOKO WASTE DUMP: A CASE STUDY

In Nigeria, 2,888 tons of assorted toxic waste from Italy was found to have been illegally dumped at the fishing port of Koko in June 1988.

The Koko premises was owned by Mr. Sunday Nana, a 65 year old farmer, who hired out the site to foreign importers for a paltry sum 500 per month, he was unaware of the nature of the material stored in his backyard. The hint got to the Nigerian government through a letter written by

eight Nigerian students in Pisa, Italy about plans to dump dangerous chemical waste that had been rejected in European to Nigeria.

The man behind the deal is an Italian businessman, Gianfrance Raffaelli, who has been resident in Nigeria for 20 years. Irukep, an ailing construction firm, had decided to diversify its operations into the lucrative toxic waste trade.

However, Mr. Raffaelli was able to import the toxic waste into the country with the help of some Nigerians and corporate agencies such as Niger Shopping Agency, Michem Nigeria Limited and Irukep Construction Company, all based in Lagos.

The dumping episode led to ground water pollution, resulting to distortion of aquatic life, as a result of constant beaten of the chemical waste by rain. Cleaning up the contaminated backyard of Sunday Nana affected workers. Some suffered severe burns, other vomited blood, and one man was partially paralyzed. Moreover, Nana's death was attributed to the incidence. There were hints that traces of Polychlorinated Biphenyls (**PCBs**) were found in his blood.

EFFECTS OF TRANSBOUNDARY MOVEMENT OF HAZARDOUS WASTE IN DEVELOPING COUNTRIES

The growing threat to human health and the environment posed by the increased generation and transboundary movement of hazardous waste has given rise to concern at the international, regional and national levels.

However, importers and exporters tend to ignore the tremendous external costs or externalities, associated with transboundary shipments of hazardous waste. The costs/effects include.

1. Local Environmental and Public Health Effects

These effects may be so great as to eliminate all financial benefits from any agreement to import waste for disposal. Environmental and public health problems may be particularly devastating to developing nations because such nations lack experiences with hazardous waste disposal end, as a result, have few regulatory or technological controls for handling such waste.

In communities with hazardous waste disposal sites, chronic and acute health problems have been linked with accidental and routine release of hazardous waste, which may contaminate the atmosphere, soil or groundwater. Ultimately, the costs of dealing with such local environmental and public health problems fall entirely on the people of the importation nation.

2. Effects/Danger from Transportation of Hazardous Waste

Transporters have a diminished incentive to avoid accidents resulting from transboundary hazardous waste shipments, in part because most countries liability regulations are weak or unenforceable once the waste has left its country of origin. Without the prospect of liability generators and transporters are more likely to be careless and, therefore, to have accidents. Another reason for careless transportation is the hazardous waste has a negative value for the generator. The global environment and in particular, nations along hazardous waste transport routes eventually bear the cost of such carelessness.

3. Global Concerns

The trans-frontier movement of hazardous waste to developing nations implicates enormous concerns. This is because pollution resulting from improper disposal has no respect for national boundaries.

Also given developing nations' inexperience in handling hazardous waste and large quantities of such waste generated each year, the possibility of a major international environmental disaster exists. Although these disasters did not occur during the transportation of toxic waste, the 1984 cyanide disaster in Bhopal, India, and the 1986 nuclear accident in Chernobyl highlight the potential magnitude for an international disaster involving hazardous materials.

Both accidents illustrate the trans-national nature of environmental disasters. In either situation, however, the costs of remedying environmental damage are borne not only by the importing nation, but also by its neighbours.

Transboundary movement of waste clearly affects more than **they** do importing nations. The export of hazardous waste to developing nations exposes the importing nation, neighbours, every nation along the transportation route, and all nations with which the importing nation trades agricultural products to the dangers of mishandled hazardous waste. Since the mid 1980s, the international community has come to realize the global importance of this issue and has joined together to form a variety of multinational solutions to this problems. However, beginning with the Basel convention in 1980 and continuing through the Rio-declaration in 1992, the multitude of opinions have failed to coalesce into a single dominant solution for the externalities of hazardous waste exporting, which continue to be a vexing problem.

THE BASEL CONVENTION (1989) The Final Act of the Basel Convention

The first attempt and major agreement at the international level to foster a global control of transboundary movements of hazardous waste was the 1989 Basel Convention sponsored by the United Nations Environmental Programme (UNEP). The Basel Convention was the result of nearly a decade of work by members of the United Nations to create a binding treaty on the transboundary movement of hazardous waste. The challenge of the convention was reconciling the interests of the developing nations, which sought tight restrictions on hazardous waste exporting, with the interest of the industrialized nations which wanted exporting to remain a viable alternative for hazardous waste disposal.

Although most of the 116 representatives to the United Nations initially refused to sign the treaty in 1989, a sufficient number of nations have subsequently ratified the convention so that it formally entered into force on May 5, 1992, three years after the first conference of these parties ended.

A central concern of the Basel Convention is the overall reduction of hazardous waste generation. The conventions primary means of reducing waste generation is to increase the cost

of hazardous waste exportation, thereby forcing industries to reduce their waste generation rather than continuing to ship it abroad.

Article 4 of the convention attempts to accomplish these goals by preventing toxic shipments in five situations:

1. First, Article 4 requires both importing and exporting parties to block the movement of specified types of waste that the importing nation does not want.
2. Second, for waste not specifically prohibited by the importing state, both importing and exporting parties must prevent any waste shipment to which the importing state has not formally consented in writing. This procedure is known as “notice and consent”.
3. Third, the convention requires exporters to prohibit any waste shipment, particularly to a developing state, if the exporter has reason to believe that the wastes in question will not be managed in an environmentally sound manner.
4. Fourth, all parties to the convention must prevent the shipment of any waste hazardous or non-hazardous, meant for disposal in Antarctica.
5. Finally, all parties must prohibit the import and or export of any waste hazardous, involving a non-party state. The purpose of this last prohibition is to lock out, or exclude, non-ratifying states, such as the United States, from all legal, hazardous wastes trade with state parties to the convention.

The notice and consent provision and lock out provision are particularly important to the Basel convention. The notice and consent provisions promote the exchange of information, allowing all affected nations to make informed and intelligent decisions about the movement of hazardous waste across their borders.

The lockout provision provides is compelling incentive for all United Nations member states to ratify the Basel convention. The threat of being locked out of trade with certain regions of the world provides an incentive to become a party to the convention.

Under certain circumstances, however, the lock out provision may discourage ratification of the Basel convention. For instance, by refusing to join the treaty – claiming that it does not protect developing states sufficiently – the Organization of African Unity (OAU), now AU states affectively banned all hazardous waste imports from states that ratified the Basel Convention.

Thus, nations contemplating ratification were locked out of the hazardous waste trade with some potential recipients of waste, regardless of whether they ratified the convention. If these nations ratified the Basel Convention, they would have been locked out of trade with OAU nations under Article 4, section 5 of the convention. If these same nations failed to ratify it, they themselves would have been excluded from trade with parties to the Basel convention under the same provision. The catch-22 mechanism has impeded further movement towards ratification and, in turn, has limited the effectiveness of the Basel convention.

Article 9 of the Basel convention addresses the problem of illegal traffic in hazardous waste. Illegal traffic, according to article 9, is traffic in contravention of national legislation and relevant international legal instrument, as well as traffic not carried out in compliance with internationally accepted guideline.

Article 9 (3) states that the “State of export or the exporter or generator should be responsible for the disposal of any hazardous waste which are deemed to be illegal traffic within the meaning of convention”.

Second Conference of the parties to the Basel Convention

Signatory states to the Basel Convention met in Geneva, Switzerland on March 25, 1994, at the meeting, the parties reached a decision that may develop into a sixth situation under which the transboundary movement of hazardous waste may be banned. The members state agreed to a total ban on hazardous waste exports from nations belonging to the Organization for Economic Cooperation and Development (OECD) to non-OECD nations.

The decision marks a significant departure from the Basel convention, namely, making hazardous waste exportation less appealing economically rather than prohibiting the trade outright. Nevertheless a ban on hazardous waste exports from OECD nations to non-OECD nations effectively would eliminate all hazardous waste exporting to less developed nations, further promoting the goals of the Basel convention.

THE LOME IV CONVENTION

As many developing nations began to realize that the Basel Convention would fail to protect their interest adequately, some of these nations decided to form their own multilateral treaties banning the importation of hazardous waste into their territory.

In 1990, the African, Caribbean, and Pacific states (ACP states) and the European Economic Community (EEC) signed the Lome IV convention. The convention bans all hazardous waste exports from EEC states to ACP states and prohibits ACP states from accounting hazardous wastes imports from any other nations. These two requirements make the Lomeiv CONVENTION “most sweeping international ban on the hazardous waste trade to date”.

The position of the Lome IV convention suggests a departure from the stance taken by many industrialized nations at the Basel convention, disagreement over the appropriate extent of the ban on hazardous waste delayed the implementation of the Basel convention until May 5, 1992, states became effective immediately, notwithstanding, the fact the rest of the convention had yet to take effect.

The revolutionary aspect of the Lome IV convention is its complete ban on hazardous waste export to ACP states, regardless of whether the waste originates in EC member states. The importance of hazardous waste exporting to African nations illustrated by the fact that in 1988,

the Nigerian government threatened hazardous wastes importers with death by firing squad.

When the industrialized states refused to agree to a total ban on hazardous waste exporting, the African states recognized that they would have to take the initiative to protect themselves.

THE BAMAKO CONVENTION

The failure of the Basel Convention to protect adequately the continent of Africa, following the treaty's lack of a complete ban on the transboundary movement of hazardous waste, made the then organization of African Unity, now Association of African Unity (AAU) to develop the Bamako Convention. In addition, the AAU believed the Basel Convention guidelines could be evaded too easily because no effective system existed for the administration of the treaty.

The Bamako convention aimed at banning all imports of hazardous waste into African and restricts the movement of waste already in Africa.

Although both the Bamako and Lome IV convention protect African states, these conventions are distinguishable, the main distinction between the Bamako convention and the Lome IV convention lies in the composition of the signatories of each agreement – members of the AAU and ACP states respectively.

All OAU member states have similar environmental concerns, allowing the Bamako convention to address broader range of issues as well as more specific environmental issues and threats. Thus, the Bamako convention, while sharing the Lome IV policy goals of protecting African nations, is both broader and more specific than the Lome convention.

The Bamako convention was designed to provide greater protection to African states than the Basel convention. Although the preambles to both the Basel and Bamako conventions are similar, several important differences between the two agreements make the Bamako convention broader. These differences are:

1. The Bamako convention completely bans all hazardous waste imports into Africa, including the importation of waste for use in recycling, a frequent loophole in Basel convention. Article 2 of the Bamako convention defines hazardous waste more broadly than the Basel convention.
2. In response to fears that the administrative framework of the Basel convention is ineffective, Article 5 of the Bamako convention requires each member state to designate competent authorities, a focal point, and a dump watch.
3. Article 4 of the Bamako convention specifically prohibits the dumping of hazardous wastes at sea or in internal waters, a prohibition conspicuously absent from the Basel convention.
4. The Bamako convention applies unlimited joint and several liabilities on the generators of improperly disposed waste. The Basel convention, on the other hand generators of hazardous waste.
5. The Bamako convention mandates extremely high standards for the prevention of pollution. The Bamako standards are much more stringent than those found in the Basel convention.

The Bamako convention is broad scope and high standards ultimately may limit the economic development of African nations. Specifically, the broad definition of hazardous waste, which closes the perceived loophole for recycling materials, limit African nations to the use of these materials already found on the continent thereby inhibiting industrial growth in Africa.

Nevertheless, the OAU appears to have made the conscious decision to protect its nations from hazardous waste even at the expenses of diminished industrial growth.

THE RIO DECLARATION (1992)

The result of the United Nations Conference on Environment and Development was the Rio Declaration. The conference was held in Rio de Janeiro Brazil in June 1992.

Rio declaration is a legally non-binding statement of principles concerning the global environment and development. The scope of the Rio Declaration is extremely broad recognizing each nation's duty to "protect he integrity of the global environment" and to provide priority treatment to the special situation and needs of developing countries, particularly, the least developed and those most environmentally vulnerable. Although the Rio declarations not legally binding, it is significant because it represents the views of a large majority of the world's countries.

Importantly, the Rio Declaration proclaims that the transboundary movement of hazardous waste should be discouraged.

PRINCIPLE 14

“States should effectively cooperate to discourage or prevent and transfer to other states of any activities and substances that cause severe environmental degradation or are found to be harmful to human health”.

This principle calls for a collective effort by member states of the United Nations to prevent the movement of materials harmful to environment and/or humans.

PRINCIPLE 19

“States shall provide prior and timely notification and relevant information to potentially affected states on activities that may have a significant adverse transboundary environmental effect and shall consult with those states at an early stage in good faith.

This principle sets up a prior notice system between state, similar to the notice and consent provision found in the Basel convention. These principles, demonstrate a movement away from the hard line that industrialized nations took in the Basel convention toward a view that developing nations must be protected from hazardous waste exports.

Rio declaration, therefore, promise to boost the continually developing body of international environmental law and to aid in development of a more effective global environmental policy.

RECOMMENDATIONS/CONCLUSION

From the discussion above it is obvious that transboundary movement of toxic and hazardous wastes poses threat to the developing countries and constitute environmental hazardous on a global scale. These hazards could be avoided if only we could exercise some restraint and have due regards for the quality of our environments rather than the use of laws, which face problems in securing compliance of states with its requirements.

Although, it is not in the nature of man to exercise caution without compulsion, either direct or indirect. Indeed, everybody including the polluter will tell you that he is against pollutant but that in himself does not make him stop polluting or engaging in activities that pollute the environments such as waste trade.

How then do we combat the problem. The solution to transboundary movement of hazardous waste should not be restricted to scientific, technological or economic sphere; rather, there is need for persuasion and improvement of environmental education, on a global scale, to create awareness about the dangers inherent from illegal traffic of waste across national boundaries as

against the use of stringent laws or legislations which leads to improper disposal of hazardous and toxic wastes.

Thus recommendation is born out my minds having considered conflict of interest in international conventions on transboundary movement of hazardous waste.

In addition the famous agenda 21 supported the idea of creating environmental awareness on a global scale as key to the development of strategy for a clean environment universally.

Therefore, the recognition of burden or dilemma faced by the developing countries in hazardous waste exporting is crucial to the solution of the problem.

GATT/WTO AND CONTROL OF ILLEGAL WASTE TRADE

Most developing countries are signatories to Multilateral Environmental Agreements (MEAS) which incorporate diverse trade measures such as, import bans quotas and traffic, as enforcement mechanisms to tackle environmental problems. Out of a total of about 180 MEAS screened in 1996, eighteen contained trade restrictions clauses for their success.

Trade measures in MEAS pose potential conflicts between fundamental international trade policy (specifically GATT/WTO rules under the provisions of Article I and III concerning national's treatment and non-discrimination and Article XI prohibiting quantitative restriction on international trade and global environmental objectives). The only plausible existing escape valve for MEAS is Article XX GATT which grants exemptions from GATT/WTO PRINCIPLES of non-discrimination for trade measure which are taken to protect human, animal or plant life or health or to conserved natural resources.

With respect to the appropriateness of including trade measures within the IEAS (International Environmental Agreements), it is apparent that they are effective and can yield important environmental benefits. For instance, Article IV of the protocol has certainly reduced the worldwide use of eniorotiurocarbons, lessening the threats of ozone layer.

However, the consistency of these trade measures under the GATT/WTO rules remains undefined because the world environment does not appear in the GATT/WTO affects. As a result, lack of clarity may prevent inclusion of appropriate trade measures in future environmental agreements since the negotiators will have little guidance on what in or in not permitted under the interpretations of the current GATT/WTO rules.

The dilemma inherent in this development is the facts that come of the International Environmental Agreements (IEAS/MEAS), most notably the Basel convention on the control of transboundary movement of hazardous wastes and then disposal which contain trade measures that are potentially incompatible with WTO rules, mural to the benefits of the developing countries.

The trade measures in these MEAS (Multilateral Environmental Agreement) have not been challenged in the WTO, if they were challenged and a similar narrow interpretation of Article XX were adopted as was done in the tuna-dolphin dispute; this would be detrimental to developing countries for an import ban on the shipment of hazardous wastes to non-OECD countries.

PROTECTION OF OZONE LAYER

This is a colourless gas that has a very pungent odour. Each Ozone molecule is made up of three Oxygen atoms, hence it is formula is (o₃). Ozone is formed when Ultraviolet Radiation cause Oxygen molecules (o₂) in the upper layer of the atmosphere to split apart. If a freed oxygen atom (o) bumps into an oxygen molecule (o₂), the three oxygen atoms reform as Ozone (o₃). A natural balance will keep us well supplied with Ozone. Up in the **Stratospher** (that is, the layer of atmosphere which lies about 15 to 50 kilometers above the earths surface) small amount of Ozone is constantly made by the action of sunlight on oxygen. At the same time, Ozone is been broken down by natural process. The total amount of Ozone usually stays a constant because it is formation and annihilation occurs at about the same rate, (Australian Academy of Science).

As pointed out earlier, each Ozone molecule is made up of three atoms. But unlike oxygen, Ozone is a poisonous gas, and an increase in its concentration at ground level is not something we would want or toy with as mortal men. However, on the stratosphere where Ozone exists naturally, it blocks out the sun's **ultraviolet** rays (a form of electromagnetic radiation) and it is a lifesaver. Lets have a practical appreciation of this: Go outside on a fine day and feel the sun warm your face... what happens when a cloud passes over? You will notice that the clouds takes away some of the heat and light coming from the sun, much the same way that a cloud takes away some of the heat and light coming from the sun by blocking it, the same way the same way the Ozone layer in stratosphere blocks out the sun's deadly ultraviolet rays. It acts as our planet's natural sun block. It is instructive to point out at this minute that the sun does not just produce heat and light, but throws out all sorts of other types of electromagnetic radiations including ultraviolet radiations.

In 1985, scientist identified a thinning of the Ozone in the Antarctic (regions in the south pole of the earth) during the spring months which later became known as the "Ozone Hole". The scientific evidence shows that man-made chemicals are responsible for the creation of the Antarctic Ozone hole and are also likely to play a role in global ozone losses. These chemical used by man which depletes the Ozone are referred to as "Ozone Depleting Substances (ODS).

OZONE DEPLETING SUBSTANCES (ODS)

Ozone Depleting Substances have been identified in a number of industrial and domestic products. Very common substances in this respect are the Chlorofluorocarbons (CFC). These are organic compounds made up of atoms of Chlorine, Fluorine and Carbon.

- | | | | |
|----|--------------------|---|----------------------------|
| 1. | Refrigerants | - | Fridge and Air-Conditioner |
| 2. | Air Blowing agents | - | Foam plastics |
| 3. | Cleaners | - | Computers |
| 4. | Body Sprays | - | circuit boards |

5. Insecticides - aerosol.

They were commonly used as refrigerants in refrigerators and air-conditioners, as air blowing agents in foam plastic, as cleaners for computer circuit boards. CFCs do not occur naturally, their increase in the atmosphere is as a result of man's increased scientific pursuit. Beginning in the 1940s, there was a rapid increase in the rate of manufacture, hence the escape of CFCs.

When CFCs are released into the stratosphere, they are broken down by sunlight present in the stratosphere, producing Halogen (i.e. Chlorine) atoms, which subsequently destroys the Ozone through a catalytic cycle. CFCs are also found in body spray and other similar containers like insecticides. It is pertinent to state clearly here, that CFCs are not in the body spray itself, but in the container which contains aerosol, this is a substance kept inside a can which keeps it under pressure and as such provides the ability to spray properly. You will agree with me that if a perfume container is punctured, it will not be able to let out the content, though the liquid is present in it. This is because, the aerosol content which contains CFCs and provides that spraying strength had been let out into the atmosphere. (Ozone layer: Important Legal Notice's). it is of interest to quickly point out that contrary to popular believed, though held in ignorance; there are no holes in the Ozone layers. What we have is rather a general decrease in the number of Ozone molecules scattered throughout a band of the stratosphere above certain regions of the earth. The phenomena are more like a carpet thinning. (Ozone Depletion-Glossary Earth's sunscreen be Australian Academic of Science).

CONSEQUENCES OF OZONE DEPLETION

The Ozone layer protects most of the sun's biologically harmful ultraviolet radiation called "UV-B". Natural events like volcanic eruptions can have adverse effect on Ozone layer, this however, cannot be compared with mad-made ODS. The amount of UV-B reaching the Earth's surface has been shown to correlative with the extent of Ozone depletion. In 1997, UV-B continued to rise at rate of 20% percent per annum. Increased UV levels on the earth surface are damaging o human

health, air quality, biological life, and certain materials such as plastics. Human health effects include increase in the incidence of certain type of skin cataracts and immune deficiency disorders. It can also irritate the membrane lining the nose, throat and airways and can trigger or exacerbate asthma attacks. Increase penetration of UV, results in additional production of ground level Ozone, which causes respiratory illness.

Biologically, UV affects terrestrial and aquatic eco-system, altering growth, food chains and biological cycles, in particular, aquatic life occurring just below the surface of the water, where plant species forming the basis of the food chain are most abundant, are adversely affected by elevated levels of UV radiation, the tensile (the substance enabling rubber to bend without breaking properties of most plastics can be affected by exposure to UV radiation). Depletion of stratospheric ozone also alters the temperature distribution in the atmosphere, resulting indeterminate environmental and climatic impacts.

INTERNATIONAL LEGAL FRAMEWORK FOR THE PROTECTION OF THE OZONE LAYERS

Despite existing regulation of ODS, there continue to be severe Ozone depletion and maximum stratospheric levels of chlorine and bromine which are predicted to occur only during the next decade. However, the success of the Montreal protocol has already been observe in terms of changes in the concentration of man-made chlorine containing chemicals in the troposphere (i.e. the rate of release of ODS to the atmosphere have been reduced).

MONTREAL PROTOCOL (1987)

The parties to the agreement have regularly revised an intergovernmental document signed by 180 states in 1987. This agreement has been revisited in Japan, London, Sri Lanka and Beijing. It established restrictions for the manufacture and use of Ozone depletion substances in an international effort to reduce Ozone to reduce Ozone depletion. The text of the protocol with the 1990 (Japan) and the 1992 (Sri Lanka) amendments could be reached at:

Threat to the Ozone layer persist as government seek tighter controls recognizing the need to eliminate any remaining weakness in the international regime for protecting the earth's Ozone layer, the meeting of governments in Sri-Lanka to strengthen the effectiveness of the Montreal Protocol on substances that depletes the Ozone Layer is said to be laudable step by government to protect the environment.

“Despite the enormous cut in ozone-depleting chemicals achieve under the Montreal Protocol, the stratospheric layer remains in poor health as a result of past emissions... to minimize the damage to humans and the environment caused by increased ultraviolet (UV-B) radiation reaching the surface we need to tackle simultaneously all the remaining sources of these dangerous chemicals. (Klaus Toepfer, Executive Director of UNEP).

SRI-LANKA (1992) AMENDMENT TO THE MONTREAL PROTOCOLS

This amendment specifically looked into the following areas and state thus: -

1. Helping governments to comply with the Montreal phase out schedules, in line with this, developing countries having financial problems have been catered for by the Multilateral Fund (Established in 1990), this fund is for the period of 2003 to 2005, and the fund has disbursed more than 1.2 billion dollars since 1991.
2. Discouraging the manufacture and selling of new ODCs. The Montreal covers 1996 chemicals, but the global chemical industries, manufacture thousand of new chemicals every year, some of which then enters the markets, the risk is that some of these new chemicals are as well dangerous to the Ozone layer. Concerns have been raised about such recently manufactured chemicals like, Hexachlorobutadiene (used as a solvent). N-Propyl Bromide (being aggressively) marketed as a solvent, as a feedstock and as a carrier and intermediate for pharmaceutical and other industries, and Halon-1202 (used in fire fighting).
3. Clamping down on illegal trade in CFCs and other substances.

4. Needs to train stronger enforcement officers, improving regional customs corporation, enhancing regional networking for sharing information and experiences and greater awareness raising to help buyers to avoid illegal substances unknowingly.
5. Promoting alternatives to ozone depleting chemicals. The amendments also considered the essential use exemptions for 2002 and beyond.

THE BIJING AMENDMENTS (1999) TO THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETES THE OZONE

This amendment takes a more forceful approach to the protection of the Ozone layer. Under this agreement, countries have been called upon to monitor the consumption and production of Halon 1202 which is an industrial solvent and a fire extinguisher this amendments was adopted a the eleventh meeting of the parties in Beijing on 3rd December, 1999, and came into force on 25th of February, 2002. It also placed a total ban on HCFCs which the Montreal accepted as an alternative to CFCs.

“The coming into force of the Beijing amendment sends a strong signal that countries are committed to protecting and restoring the Ozone layer which shields life from harmful levels of ultraviolet light... it shows that nations are fully being efforts to enforce the Montreal protocol, the treaty to which to Beijing is linked, 20 countries is the minimum needed to bring it into force. However, I urge all nations to ratify as a sign of solidarity with the global efforts to protect the Ozone layer”. (Klaus Toepfer, Executive Director of UNEP).

This agreement has so far been ratified by the following countries: Chile, Gabon, Luxeemburg, Jordan, Canada, Czech Republic, Palaw, New Zealand, Finland, Somalia, Sierra Leone, Samoe, United Kingdom of Great Britain, Northern Ireland, Burundi, Congo, Malaysia, Netherlands, Germany, Sao Tome and Principe, Togo, Federated States of Micronesia and Norway. One begins to wonder what could be happening to the almighty Nigeria, a country whose environment have been greatly threatened. If Burundi and Somalia could participates in this ratification aimed at the substainable development of the party states, surprised why Nigerian has

not done same. For the full text of the Beijing amendment, see, you may as well write to Tore J.

Brevik, spokesman for Unep. Tore, brevik@unep.org.

YOU AND THE OZONE LAYER

I think you have already taken the first step to help protect the Ozone layer/environment by listening/reading this article to avail yourself with the relevant information on the problems and causes of Ozone depletion. In the same vein, I will suggest the following steps to you:

- 1 Endeavour to use products which are labeled “ozone-friendly”
- 2 Ensure technicians repairing your refrigerators and air conditioners
- 3 Vehicles air conditioning units should regularly be checked for leaks.
- 4 Replace Halon fire extinguishers with alternatives.
- 5 Participate in school activities to increase awareness of the problem (i.e. join the National Environmental Youth Action).

Finally, there is a direct link between increased exposure to UV radiation and elevated risk of contracting certain types of skin cancers. Risk factors include skin type, sunburn during childhood, and exposure to intense sunlight. Recent dress style of females in Africa, which deliberately exposes a substantial part of their body to intense sunlight, is partly responsible for malign skin cancers. Please, do cover exposed skin with adequate clothing as against skimpy dresses, use suitable sunscreen, wear a hat and UV certified sunglasses to protect your Eyes. **BE ENVIRONMENTALLY CONSCIOUS.**

AN EXAMINATION OF THE CONVENTION OF BIOLOGICAL DIVERSITY (1992)

The Convention on Biological Diversity identifies the variability among living organisms from all sources and the need to accept responsibility for conserving this biodiversity and using all resources in a sustainable manner. It was opened for signature in Rio from June 5 – 14, 1993 and afterwards at the United Nations Headquarters in New York from June 15, 1992 to June 4, 1993. The convention entered into force on December 9, June 4, 1993, having secured its 30th

ratification in September 1993 ninety days earlier. “Perhaps no other branches of international law have evolved as rapidly as human rights law and environmental law in recent years.

There have been five meetings of the conference of the parties (COP) as follows:

- COP – 1 – 28th November – 9th December 1994 Nassau, the Bahamas
- COP – 2 – 6th – 17th November 1995 in Jakarta, Indonesia
- COP – 3 – 14th – 15th November 1996 in Buenos Aires Argentina
- COP – 4 – 4th – 15th May 1998 in Bratislava, Slovakia
- COP – 5 – 15th – 26th May, 2000 in Nairobi, Kenya

There have also been sessions of the subsidiary Body on Scientific Technical and Technological Advice (SBSTTA) in Paris France 4th – 8th September 1995. Other sessions held in Montreal, Canada in 2nd – 6th September 1996, 1st – 5th September 1997, 21 – 25 June 1999 and 31st January – 4th February 2000. Likewise, there have been two Extraordinary meetings of the COP (E x COP. *Information is as at February 2002.

Most environmental laws are currently being empowered by argument of human rights, as a good and viable environment is identified as very inalienable to human well-being.

THE CONVENTION ON BIOLOGICAL DIVERSITY

The objectives of the CBD as stated in Article 1 to be pursued in accordance with its relevant provisions are:

- 1 The conservation of biological diversity.
- 2 The sustainable use of its components and fair.
- 3 Equitable sharing of the benefits arising out of the utilization of genetic resources.

FOCUS

The focus of convention is towards sustainable use in the use of the components of biodiversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby

maintaining its potential to meet the needs. Sustainable development has also been defined as projects, policies which promote per capital economic growth without jeopardizing the integrity of the physical stock of renewable and environment resources, or, in other words, “judicious and planned use of natural resources for equitable development to meet the needs of the present generation without jeopardizing that of future generations.

1. Sustainable Development by world commission on Environmental and Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.
2. Sustainable development means improving the human life while living with the carriage capacity of supporting ecosystems.
 1. Sustainable Development is a process in which the exploitation of resources
 2. The direction of investment
 3. Orientation of technological development and institution changes are all in harmony and enhance both current and future potentials to meet human needs and aspiration.

Types of Capital Stock

- A Human Capital
- B Man – Made Capital

A REVIEW OF THE ARTICLES OF THE CBD: SPECIFIC AREAS COVERED BY THE CBD

1. Rights and responsibilities

Articles 1, 2, 3, 4, cover the rights, responsibilities and scope of jurisdiction of contracting of contracting parties. The resources and components are discussed. Each states retains the rights to exploit its own resources, but also has the responsibilities of identifying and monitoring all the components of biodiversity, and integrate use into their national policy.

2. Global Co-operation

Articles 5 calls on each contracting party to , as far as possible, and as appropriate, cooperate with other contracting parties in respect of areas beyond national jurisdiction and on other matters of mutual interest. To effect, even though states retains the sovereign rights over their natural resources and technology essential access to and transfer of genetic resources and technology essential for the attainment of the objectives of the convention pursuant to Article 15 and 16. Article 17 encourage exchange of information including results of technical, scientific, socio-economic research as well as on training, specialized knowledge surveying programmes, in dangerous and traditional knowledge. There shall therefore exist technical and scitific co-opertion (Article 18) equitable handing of biotechnology and distribution of its benefits (Article 19).

❖ From the Convention on Biological Diversity.

In view of the benefits to biodiversity conservation of global co-operation, when economic benefits exclusively are disregarded, the role of the CBN in stipulating extensive co-operation is of immense value; Okorodudu-Fubara opines that without global partnership honestly pursued. Sustainable development of the world's nations will remain a mirage, a plant on a fragment of one imagination.

3. General Measures and Tools for Conservation

Articles 6 and 9 detail the needs for identification and monitoring of the components of biodiversity and the effects of conservation through sampling and other techniques. In –situ conservation will promote protection of ecosystems and their inclusive biodiversity at the same time rehabilitate and restore degraded ecosystems, natural habitats and the maintenance of viable populations promote recovery of threatened species. It also regulates. Manages or control risks associated with the release of living modified organisms and prevent introduction and/or eradicates those alien species which threaten ecosystems habitats or species. Pursuant to Article 9 proposes ex-situ conservation preferable in country of origin of such component. Co-operation may be necessary in providing support for ex-situ conservation of and research on plants, animals and micro organisms.

4. Education

Article 10, 12 and 13 call for promotion of understanding on the importance of and measure required for sustainable use of the component of Biological Diversity, support of local populations and customary use of biological resources in accordance with traditional cultural practices compatible with sustainability. Co-operation between states and international organizations is encouraged inter alia with decisions of the COP and SBSTTA taken in consequence of recommendations. Article 11 encourages adoption of economically and socially sound measure that set as incentives for conservation.

5 Mechanism for financial support

Article 20 stipulates that each contracting party, in accordance with its capabilities undertakes to promise financial support and incentives to achieve the objectives of the CBD. Developed countries shall provide financial resources to assist developing countries in implementing the obligations of the convention considering that economic and social development and eradication of poverty are the first and overriding priorities of developing country parties. Specific needs and special situations of developing countries including those that are most environmentally

vulnerable shall be taken into consideration. Article 21 describes the policy, strategy, programme priorities and eligibility criteria relating to access to and utilization of these resources.

6 Impact Assessment

Article 14 calls on contracting parties to, as much as possible and as appropriate introduce procedures requiring an Environmental Impact Assessment of its projects that could significantly affected biodiversity with a view to ameliorating and mitigating such effects. Policies and legislation that ensure that environmental consequences are taken into account are to be introduced. Where risks or damage is imminently high, action to prevent or minimize damage should be mitigated. Effects, which go beyond the limits of natural jurisdictions, must be reported immediately and arrangements made for emergency responses to such activates, natural or anthropogenic. States shall be liable for restoration and compensation for damage to biodiversity to other states.

7. Administrative Provisions and Mechanisms

Article 22-42 deal with administrative organization and procedures of the convention. The convention exists apart from other international convention. A conference of the parties (COP) and its subsidiary body on Scientific Technological Advice were established as well as a secretarial to receive reports signature, ratification, accession, with draws financial and secretariat interim arrangements and hold the authentic texts in major languages of the world.

A CRITIQUE OF THE CONVENTION ON BIODIVERSITY

The need for the conservation of natural resources, most or all of which develop out of biological sources is as old as environmental protection itself. The CBD was results of legal instrument ensure sustainable use and the first meeting of the conference of the parties (COP - 1) declared that they:

“... Recognize in view of rapid rate of species loss, the urgency of the task we face in conserving biological diversity;

- Recognize that as reflected in the convention, conservation of biological diversity is not only a question of species extinction or ecosystems in need of preservation, but is linked to achieving social, economic and cultural progress, in sustainable manner, for the benefit of present and future generations:
- Regard the convention as a treaty with a global vision, based on common concern, mutual reliance and fair and equitable sharing of benefits;
- Regards the convention as much more than just a set of rights and obligations; it is a global partnership with new approaches to multilateral cooperation for conservation and development.
- Welcome the inauguration on 8th December 1994 of the international decade of the world's indigenous people, recognize the vital role that indigenous people's issues under the convention.
- Recognize that the first meeting is a significant step for the promotion of sustainable development of which biological diversity and its components are on integral part.
- Declare the will spare no effort in undertaking the obligations embodied in the convention for the benefit of life on Earth, for present and future generations.

ISSUES THAT CREATE PROBLEMS FOR THE CONVENTION ON BIOLOGICAL DIVERSITY

1. Intellectual Property Rights

One of the most controversial issues addressed by the CBD is intellectual property right related to biological and genetic resources. Prior to the CBD there have been not to successful attempts to apply relevant intellectual property law to biodiversity in the U.S.A. The issue is closely linked to equity issues, although much of the Earth's biodiversity is found on developing countries. These countries have not necessarily benefited equally with developed countries from industrial, medical, agricultural and other uses of biological and

genetic resources despite the provisions of Article 1 which objectives commits parties to a fair and equitable sharing of benefits arising out of the utilization of genetic resources.

2. Rights of indigenous people

This is related to intellectual property rights but specifically deals with the role of indigenous people in the protection of biodiversity. Former president of the World Conservation Union, M.S. Swaminathan states that “Despite the provisions of the CBD nothing yet protects the rights of indigenous farmers who harbor traditional domestic seed strains or tribal commercial plant breeders are more likely to benefit legally and financially from the sale of useful varieties than those who have conserved plant stocks for centuries. The convention does not treat fairly, indigenous agricultural practices even though it recognizes the role of indigenous people in biodiversity protection. There are many trends in modern agricultural practices that tend to diminish biodiversity globally.

3. Transfers and Access to Genetic Resources and Biotechnology

The major reason why major developed countries have refused to sign the CBD is because of their desire to retain their scientific and technological breakthroughs. The soft law provisions for cooperation between states have proved insufficient to break this Association (ASSI), American Farm Bureau, and the National Cattlemen’s Association played vital role in the defeat of the Treaty at the USA Senate’s 103 congress despite the vote of 16 to 3 on June 29, 1994 for ratification by the Senate Foreign Relations Committee. An earlier indication of the Treaty’s land use policies was embodied in the Endangered Ecosystem Act in 1900. A study, “Biological Diversity Conservation and Environmental Research Act, but neither became law.

Agriculturists and scientists must have felt that these land use policies would hinder too much of their operational activities and, since they hold the economy of the USA, they were able to prevail upon the senate, in a very tedious process, to drop the CBD in their favor.

4. Biopiracy

Article 15, paragraph 5 clearly states that “ access to genetic resources shall be subject to prior informed consent of the contracting party providing such resources, unless otherwise determined by that party” this clause poses a lot of problems to indigenous providers of biodiversity. The State may grant permission for use of resources for research or commercial common knowledge, are considered to be in the public domain. Most of the exploiters, usually from developed countries, on the other hand, keep their own scientific and biotechnological innovations and results selfishly to themselves. This stirs by violence. Dr. Swaminathan effused that there must be ethical principles in the utilization of the knowledge of indigenous people just as there should be ethical principles in the utilization of biological resources. The impact of clashes, itself has far reaching effects on biodiversity. The effects of war and need for global

5 Financial Obligation

There is a need to address the level of financial commitment by developed countries to developing countries. The parties after much debate stipulated in Article 20 the provision of parties to meet the agreed full incremental costs of implementing measures which fulfil the obligation of this convention...” based on a mechanism for the provision of these financial resources. It however does not suggest any mandatory funding level and is thus considered by some not strong enough to provide the level of commitment sought by developing countries.

6 Global Peace and Responsibility

There is a basic need to view the whole earth as just one global village in which the activities at one part affects, in one way or the other. Whether long-term or acute, every other part of the global environment. One of the major causes of biodiversity destruction is war. The only way international treaties can be enforced is when there is serious threat to global security. Only then will it be possible for the Security Council of the UN to move in. The CBD precautionary principle states that where there is a threat of significant reduction or loss of

biological diversity, full scientific certainty need not be awaited before the international community takes action to protect the environment, particularly when the potential environment harm is irreversible.

It might require a Summit on Global Peace, explaining the interconnection between various activities in different part of the world on both its immediate and remote environment. Example is the case of global warming and weather change caused by industrialization. Even villages without any form of development suffer the consequences such as flooding, drought, etc. Wars such as the Gulf war, the America-Japan way (Hiroshima), as well as communal and tribal clashes have vast consequences on biodiversity. These author believes also that the lack of sincere desire and responsibility toward global biodiversity, by providing scientific, technological, technical and financial assistant to the developing world, which carry the greater proportion of biodiversity, without the conditional consideration of immediate reciprocal economic returns may well be the reason behind the refusal of strong countries like the USA and Britain to sign the Biodiversity Treaty.

7 Judicial irresponsibility

The paternalistic attitude of the Nigeria Judiciary in environment matters has been the cause of little progress in environment protection in the country. There seems to be machinery in the Biodiversity Treaty to ensure that Contracting Parties abide by the provisions of the convention. It should be considered a crime that a Foreign Oil Company Like Shell Petroleum Development Corporation (SPDC) would carry out certain operations in Nigeria using procedures that it cannot use in its country of origin. If the proponent or executor of a development project, the host country's monitoring protectorate, as well as the international community cannot jointly enforce a ratified Treaty then that treaty is practically useless.