COURSE GUIDE

EMT 501
ENVIRONMENTAL LAW AND POLICIES

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MODULE 1

UNIT 1 ENVIRONMENTAL LAW

CONTENTS

1.0 INTRODUCTION

The coming into existence of environmental law was a result of the need to safeguard human health and adequately protect the environment from pollution, degradation and destruction. It is imperative to state that the environment which is *sine quanon* to the existence of life needs protection. The extent to which the laws are successful in the protection of the environment will depend largely on the components of the environment that it is able to protect.

In order for measures put in place to protect the environment to be impactful, all stakeholders must be on the same page in respect of the application of Environmental Law in the sustainability of the environment. For Environmental Law to be effective it cannot operate in isolation of Science and Technology. They all must work in tandem and operate in synergy.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- Understand the term environmental law
- Understand the concept of environmental law both in Nigeria and in other parts of the world.

- Understand the different concepts of the environment.

3.0 MAIN CONTENT

Environmental Law could be referred to as that branch of Public Law which contains rules and regulation which have as their object or effect the protection of the environment. The environmental law is a recent study in the faculties of law in most Nigerian tertiary institutions. Environmental cannot be discussed in isolation without the concept of the environment. The definition and the concept of the environment is the main fulcrum of this course. The essential of the environmental law is that it has emerged as a predictable attendant to protect the environment by regulating and regularising it against abuse and ill-treatment due to the anthropogenic activities of mankind.

3.1 Definition of Environmental Law

Generally, there is no one Universal definition of environmental law. The onus of defining the subject matter rests squarely with individual environmentalist. The definition of environmental law is wide and far reaching. For instance, environmental law means the laws that regulate the impact of human activities on the environment and this covers a broad range of activities that affect air, water, land, flora or faunas. It includes laws that relate to the protection of animals and plants.

On the other hand Bimal N. Patel, *ed* (2005) defined environmental law also known as environmental and natural resources law as a collective term describing the network of treaties, statutes, regulations, common and customary laws addressing the effects of human activity on the natural environment. It is to be noted that the core environmental law regimes address environmental pollution. A related but distinct set of regulatory regimes, now strongly influenced by environmental legal principles, focus on the management of specific natural resources such as forests, minerals, or fisheries. Other areas such as environmental impact assessment may not fit neatly into either category, but are nonetheless important components of environmental law. This is corroborated by legal career path that environmental law is the collection of laws, regulations, agreements and common law that governs how humans interact with their environment.

The purpose of environmental law is to protect the environment and create rules for how people can use natural resources and on what terms. Laws may regulate pollution, the use of natural resources, forest protection, mineral harvesting and animal and fish populations. Another attempt may mean the law relating to the protection of public health and our natural man made surroundings. The environment is where we all

live in and the law is what we live in and by. According to Ola (1984) environmental law covers the whole universe including not only human beings but also plants, animals, forests, refuse, bacteria/diseases and insects.

3.2 Basic Concepts of Environmental Law

Law is considered not only as a policy science – related discipline but also as a social institution. This means that law is both a tool for normative policy analysis and a social policy instrument. Thus, the growing use of law as an instrument of organised societal direction has been described as one of the characteristics of modern society (Yehezdel, 1971). This, in effect, has shown that, law as a discipline possesses, at least, a dual nature; that is, an abstract set of rules and a body of social machinery which functions to secure and maintain order in the community.

Be that as it may, the word concept means an abstract notion, a mental impression of an object, it could also be referred to as the idea underlying a class of things.
In discussing the concept of environmental law, a cursory look at the word environment is very important. Alao and Oguche (2003) defined environment as the totality of life. That implies that the environment is the whole physical Universe. According to Kumar (2004) environment is the sum of substances and forces external to the organism in such a way that it affects the organism's existence. In relation to man, the environment constitutes of air, land, water, flora and fauna because these regulate man's life. Environment is a multi-dimensional system of complex inter-relationships in a continuing state of change. By environment, we mean not only our immediate surrounding but also a variety of issues connected with human activity, productivity, basic living and its impact on natural resources such as land, water, atmosphere, forest, dams, habitat, health, energy resources, wildlife, etc. succinctly put, the concept of environmental law refers to the integrated rules and principles that is legal norms, the purpose of which is to achieve environmental conversation.

Naturally, in discussing the concept of environmental law one should take into cognizance what constitute the ideas, the policies and the juridical basis that gave prominence to the need to have and develop the word environmental law. In laying credence to this opinion, a former member of the International Court of Justice (I. C. J.) stated that:
"It is the policy of the administration to vigorously pursue the protection of the Nigerian environment in order to preserve the quality of life of all citizens and conserve the resources for the benefit of future generation of Nigerians."

The concept of environmental issues has witnessed a paradigm shift globally and Nigeria is not an exception in the new horizon of not mere control, protection and management of environment health problems but with legal policing. The reason for this rapid awareness in Nigeria in recent years is not unconnected with the dumping of harmful toxic waste materials in Koko in Delta State (formerly part of Bendel State) in June 1988 and hence the subsequent need to redefine our concept of the environment.

Environmental awareness issues started globally in the 1970s but the Nigerian Federal Government was not spurred into action until the Koko Toxic Waste Dump of June 1988. This episode served as a catalyst that propelled the Nigerian Government to take action. Since 1988, national focus on the Nigerian environment and environmental programmes and policies has been receiving appropriate attention.

It was clearly stated by Okorodudu – Fubara that "Until the adoption of the National Environmental Policy on the Environment in 1989, Nigeria has no distinct and clearly articulated national policy goals for the Nation's environment. The Koko Toxic dump experience led the Nigerian Military Government to promulgating the Federal Environmental Protection Agency Decree 1988 No 58. It was first of its kind since Nigerian Independence in 1960 and in line with 1972 Stockholm Conference on Environment which Nigeria was a signatory.

The Koko Toxic waste dump gave impetus to a nationally unified law/national policies and programme on the Environment which eventually led to the promulgation of the two basic decrees that is the Federal Environmental Protection Agency Decree 1988 No 58 and the Harmful waste special Criminal Provision Decree 1988 No. 42.

To this extent Nigeria as a nation moved away from being a mere control and compensation of hazards to including laws meant for monitoring, reduction and possible prevention of environmental pollution. Besides environmental problems have no exclusive terrain, but rather a Universal problem. After all, there is only one world environment and no nation can exist in isolation, hence the environmental problems cut across socio-political, geographical and international boundaries.

4.0 CONCLUSION

It is expected that at the end of this Unit learners should be able to explain the terms environmental law and basic concepts of environmental law and also take cognizance of the genesis codify

statutes for protection, development and sustainability of our environment.

5.0 SUMMARY

In summary, learners have been able to learn the basic concepts of environmental law and the genesis of sustainable law for the Nigerian environment which emanated after the Koko Toxic waste dump saga that led the Military to promulgate two decrees which thereafter constituted the bedrock for a comprehensive national policy and statutes to curb environmental abuse.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Define the term environmental law as posited by various scholars.
2. State the statutes enacted to sustain the Nigerian Environment after the Koko toxic waste saga

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UNIT 2 HISTORICAL BACKGROUND TO ENVIRONMENTAL LAW IN NIGERIA

CONTENTS

1.0 INTRODUCTION

The historical background of every subject, especially topic relating to the environment cannot be ignored, as the law relating to the evolution of the subject matter will be the center of the discussion in this unit. Generally this will relate to the development of Environmental Law in Nigeria and other jurisdictions in the world. It is however, pertinent to know how the law for supporting our environment emerged internationally.

The role of the United Nations Organization, through its United Nations Environment Programme (UNEP) programme, the impact of the regional organizations and the embrace of the decisions of international conferences on environmental protections and sustenance of our natural environment were germane to the evolution of Nigerian Environmental law.

2.0 OBJECTIVES

The main objective of this unit:

- is for learners to be able to discuss the evolution of environmental law from the colonial era down to the era of the Koko toxic waste saga in Nigeria.
- and to also understand the role of the United Nations in fighting the menace of environmental degradation in the world over.

3.0 MAIN CONTENT

3.1 Historical Background to Environmental Law

The environment is a beautiful place to live in once treated in that regard, it is to this extent that the environment cannot be discussed without its evolution globally. The environment as beautiful as we have described it is faced with the twin pressure of population and development, and these environmental menaces however, results in its deterioration and diminution of the natural resources at a frighteningly state.

Day in, day out, our environments are been polluted with various unlawful disposals of waste, like the traditional pollutants, despite this the problem of unimpeded effluents and secretion from hazardous industries has caused pollution of the environment and consequent human health hazards.

The world becoming a global village has really affected the environment and generally the populace are not really ready to take care of the environment in proportion with the world developments, with the spring of reckless industrial growth and this may lead to an over exploitation and destruction of natural resources to an extent such that disaster will be the order of the day as the environmental support system has been damaged beyond repair.

In the words of Sengar, D. S. (2007) he stated that there is a need then to strike a balance between environment and the technological development so that we may have sustainable development. He added further that "Environmental pollution which has become a worldwide problem, many nations is giving it some required attentions. The United Nations Conference on Human Environment in 1972 was an initial major effort to diagnose the unsatisfactory state of global environment.

The efforts of the United Nations cannot be overemphasized, despite these efforts most of the nations of the world, has no national policy or laws to protect their environment, despite various threat posed by the environmental hazards. Then the advent of the United Nations Conference tagged the Stockholm Declaration on the Human Environment 1972, which for the first time in the history of the world, presented a communiqué on a legal regime for environmental protection, which highlights the problems and recommends measures to make the system of regulatory environmental management more effective and proactive.

Nigeria as a nation was not an exception to the slow development of the concept of environmental law, the nation has no single policy or law relating to the protection of the environment and this has caused a whole lot of hazards to the environment and human in general. This attitude however brought about the incident of the Koko Toxic waste that was dumped in Koko in Delta State (then Bendel State) in 1988. This singular act that is detrimental to the nation jolted the Federal Government of Nigeria into action towards promulgating environmental law and enforcement of international declarations on environmental laws.

Africa is not the only continent in the world that is affected by these multi faceted environmental problems; they are a global problem which the Stockholm Declaration on the Human Environment held by the United Nations Organization had addressed.

In response to this declaration, African nations adopted this report by organizing Lawyers Seminar on the development of environmental protection legislation in the Economic Commission for Africa Region (ECA) which critically discussed at the second meeting of the Technical Preparatory Committee of the WHOLE in Freetown, Sierra Leone in March 1981. This conference report was adopted by the 16th session of the Commission and the ^{7th} meeting of the conference of the Ministers which took place in Freetown in April 1981 by its Resolution 412 (xvi).

3.2 Pre - Koko Toxic Waste

It is imperative to reiterate that before the advent of the colonial era in Africa and Nigeria in particular, the people have a method of disposal of refuse and cleaning their environment, this is done through community efforts in cleaning and beautifying the environment and refuse are been dumped in the appropriate place created by the community at large. In achieving this act, the communities were very conscious of their environment, and to this extent mutual rules, regulations, customs, norms, ethics and cultural aestheticism to manage their immediate environment where formulated. These ways and means of tidying and averting pollution in their surroundings cut across hamlets, villages, towns and cities which formed the communities. The days for general environmental sanitation have in some cases been fixed, this is still however in place in most communities of the country.

However, most of the environmental pollutants in the present world were not on ground in those days, no industrialization as it is now, the population has tremendously been on the increase, the pressure on the land, water and air space are just too many. Therefore, the ozone layers depletion, scourge of erosion, deforestation, toxic waste

disposal/hazardous waste or/effusion were not known or at very insignificant stage unlike the present world where the environmental problems are posing serious threat to the sustainability of the world (Dharmedra, 2007)

In the era of the colonial masters there was no fantastic policy or law on environmental policy and programme. Most of the efforts of the colonial lands were geared towards Economic and Political interests, not in terms of maintenance of personal and public health. Although, the era was actually the beginning of formal policy/or programme and conceptual formulation by the colonial government to address some form of environmental pollution.

However, it may be observed that during colonial times as in the immediate post independence era in Nigeria, the perceived environmental problems actually for some form of control and management were principally in the area of domestic management. There was no regulated policy on forest conservation at the time which was capable of achieving suitable development, neither was there any legal mechanism in place to check the emerging environmental problems due largely to the economic activities of the colonial powers (Lawrence Atsegbua *et al* (2004). In the colonial era, there was no national environmental regulation aside the sanitary officers who were available in the urban and sub-urban areas but not in the rural areas.

Naturally it was not unusual that Nigeria government was not paying serious attention to the environmental problems, but there were certain laws that were in place and used for the general protection of the environmental especially government formulations to check some form of environmental pollution, for example in the criminal code Cap 77 LFN 1990, there are provisions which sanction on the pains of punishment of malodorous of water in spring, stream well, tank reservoir, and the burial of corpses within a hundred yard of a dwelling place, the vitiation of the atmosphere so as to make it noxious to the health of persons.

The period between 1960 and 1988 marked the era of political-socio-economic factors which began to enhance the development of the concept of environmental law in this part of Africa. This period however witnessed the development of cocoa industries and many other cash crops, which created many problems in terms of pollution and attracted industrial waste management issues in variably, infected the environment with various kinds of pollutants.

However, the discovery of oil and subsequent oil boom in the early seventies depicts the state of unpreparedness of the government of the day for the environmental quandary which is usually associated with

industrial development (Ola, 1984). In response to the impact of industrialization on the environment, a new course of environmental law had to be charted. This brought about the enactment of some laws such as Factories Act, the Oil Pipeline Act, 1956, the oil in Navigable Waters Regulations 1968, Petroleum Act 1969, Petroleum (Drilling and Production), Regulations 1969, Petroleum Drilling and Production (Amendment) Regulations 1973, Petroleum refining Regulations 1974. Okoye (1990) said that these laws and regulations to a greater extent depicts a sudden difference in the concept of environmental law from what it was during the colonial era. Ogbuigwe (1985) posited that the protection of the citizens health, the balancing of his ecosystem, adequate management of natural resources, the problem of compensation to pollution victims, and socio-economic and political consideration actually accounted for this movement in the concept of environmental law.

The dumping of the toxic waste in June 1988 actually changed the perspective of the government of the nation to the issue of the environment and naturally brought about more laws in line with the environment, and it is at this point that the government of Nigeria promulgated the Federal Environmental Act of 1988.

3.3 The Post-Koko Toxic Waste

In Nigeria, the "Koko incident" of 1988 rudely jolted the Nigerian government to the reality of toxic wastes when same were dumped at Koko port in the then Bendel State of Nigeria by some Italian business frauds with the active connivance of poverty stricken, ignorant and hungry villager, Sunday Nana for a miserable sum of N500.00 monthly stipend. Prior to 1988, the government of Nigeria had no meaningful environmental policy. Thanks to the resourcefulness of the Italian businessmen and Sunday Nana, the Nigerian government in its usual fire-brigade approach to problems, came out with, the Harmful Waste Decree 42 of 1988. The incidence also facilitated the establishment of the Federal Environmental Protection Agency (FEPA) through Decrees 58 of 1988 and 59 as amended) of 1992. FEPA was then charged with the overall responsibility for environmental management and protection across the country. This was until 1999, when FEPA and other relevant Departments in other Ministries were merged to form the Federal Ministry of Environment.

It became a prominent issue at the public and government levels in Nigeria. Worldwide, the environmental threats are noticeable in various forums such as acid rain, ozone layer depletion, global warming and other climatic modification, release of carbon dioxide in several tones, methane and chlorofluorocarbons into the air may lead to imbalances of natural

cycles resulting into the warning of the earth, melted ice-caps, desertification and flooding. There are also tendencies for the atmosphere to run short of oxygen – the phytoplankton; a primary source of oxygen from the sea/ocean may be affected. The nitric oxide emissions may adversely deplete the protective ozone layer therefore exposing man to the deadly ultraviolet rays as a result of the fact that the shield that covers the ozone layer is no more there.

It is not a mere saying that the adverse health hazards associated with exposure of human being to the unprotected work environment and other residential areas is highly noticed not only in Africa but it cuts across the globe. In Nigeria for example, Toxic Waste at Koko Village in Delta State, in 1988, the recent battery waste dumped at Lalupon – Ilegbon Area in Lagelu Local Government Area of Oyo State by Exide Battery Company was reported in the killing of the villagers and their animals, occurred in February 2010.

However, the changes which the 1972 United Nations Conference on the Human Environment held at the Royal Opera House in Stockholm on June 5, 1972 served as a stimulus to many nations including the third world countries. However, the efforts of most third world countries did not emerge until towards the tail end of 1980s (Imevbore et al., 1991).

Nigeria is a prominent signatory to a number of these multilateral treaties on environmental protections. In another word, Nigeria was among the 114 heads of governments represented at the historic conference held in the United Nations 1972 in Stockholm on the "Problems of the Human Environment" which properly addressed the general needs for greater environmental awareness and concern. Subsequently, in Nairobi, Kenya at a conference preceding the Stockholm Conference, Nigeria as a nation have been very prominent, this is the 10th anniversary of the Stockholm Conference which reiterated the participating nation's commitment to the protection and enhancement of the quality of human environment.

Nigeria was party to the 1979 Rabat Conference of Ministers and Assembly of Heads of State of the O.A.U which corroborated the International Strategy for the Third Development Decade – the African Region. All these efforts are directed towards national awareness of the need to protect the Nigeria environment against environmental hazards.

Though Nigeria no doubt is signatory to a large number of international and sub regional treaties, she has not promulgated the constitutionally mandated laws at the national level to give legal effect to most of these international treaties in the country. (Okorodudu – Fubara, 1998).

It is pertinent to re-emphasize that the scenario of generating and regeneration of our environment is still very fundamental to the present Democratic government and as such have made several moves towards formulation of new mechanisms for environmentally protection and sustainable development in Nigeria and is coming into place with a new approach to environmental regulations and enforcements. “All Nigerians and friends of our country are enjoined to join us in this quest to keep our environment wholesome, safe and healthy.” (Arch. (Mrs.) Halima Tayo Alao, Hon Minister of Environment, Housing and Urban Development, October (2007).

In a forum organized by the National Environmental Standards and Regulations Enforcement Agency (NESREA) between 22 – 23 October, 2007 in Abuja after its establishment on July 30, 2007 as a body corporate with perpetual succession and a common seal, it may sue and be sued in its corporate name. It is responsible for the enforcement of environmental standards, regulations, rules, laws, policies, guidelines and policies, such as the National Policy on the Environment, 1999 the Vice President of Nigeria Dr. Goodluck Ebele Jonathan represented the President Alhaji Umar Musa Yar’Adua GCFR stated that: the forum is very timely ‘at a time when world attention is focused on the challenges of environmental protection, climate change and sustainable development”. He also reiterated that at the global level, the United Nations and other multilateral organizations have, through notable global force as, provided the milestones and bench marks for new directions in formulating policies on the presentation of the integrity of the ecosystem and human well being. They have also encouraged national governments to create institutions for the protection of the environment and human health.”
It is important to further reiterate that the merging of FEPA and other agencies to form the Ministry of Environment has however created a vacuum in the effective enforcement of environmental laws, standards and regulations in the country. In addressing this, the Federal Government, created, by law, a new institutional mechanism, the National Environmental Standard and Regulations Enforcement Agency (NESREA).

NESREA is however charged with the responsibility of enforcing all the environmental laws, guidelines, policies, standards, and regulations in Nigeria. It also has responsibilities for enforcing compliance with the provisions of international agreements, protocols, conventions and treaties on the environments to which Nigeria is a signatory”.

The government on its part further reiterated it support to provide all the requisite institutional and structural support for NESREA to effectively and efficiently meet her mandate. It is our hope that the management and staff of NESREA will be single-minded about their obligation to ensure

that our society becomes innately environmentally conscious. Our desire is for an environment where all the necessary sustainable development principles are applied and enforced".

Therefore, it is the responsibility of all and sundry to ensure a healthier, cleaner and safer environment for all guided by an abiding dedication to working committedly to secure our environment. (President Umar Musa Yar' Adua: 2007 NESREA).

In this wise, Africa people and their government are very much conscious of the implications of abusage of their environment either by multinational corporations or themselves and have being taken serious measures to combat environmental menace ravaging the continent. The third world nations are aware of the hazardous implication to their environment, no wonder most of them are now adopting deliberate conceptional approach in formulating policies" which will lead to the procedures and other concrete actions required for lunching 'third world' into an era of social justice, self–reliance and sustainable development (in the 21st Century)" (Aina and Adedipe, 1991).

4.0 CONCLUSION

In conclusion, Nigeria as a nation despite its slow motion policy on domestication of international conventions, which he is a signatory to, has done a lot after the Koko Toxic Saga to protect its environment, but however a lot still need be done in area of oil pollution and environmental degradation and deforestation of our forests.

It is also important to note here that we need to re-orientate the populace on our attitude towards our environment.

5.0 SUMMARY

In this unit we have discussed to a large extent, the historical development of environmental law in Nigeria, the laws governing the environment of the country before the Koko toxic waste incident, the laws thereafter, it is to this extent that learners of this work should be able to critically analyse the eras.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Briefly explain the historical background to the emergence of environmental law in Nigeria.

2. Identify laws governing environmental law in Nigeria after the Koko Toxic Waste incident of 1988.

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UNIT 3 SCOPE AND REASONS FOR ENVIRONMENTAL PROTECTION

CONTENTS

1.0 INTRODUCTION

Environmental protection is an integral component of sustainable development measures. That the environment is threatened in all its biotic and abiotic components (animals, plants, microbes) and ecosystems comprising biological diversity (water, soil, and air) which form the physical components of habitats and ecosystems, and all the interactions between the components of biodiversity and their sustaining habitats and ecosystems, is to state the obvious. With the continued increase in the use of chemicals, energy and non-renewable resources by an expanding global population, associated environmental problems will also increase. As has been pointed out, despite increasing efforts to prevent waste accumulation and to promote recycling the amount of environmental damage caused by over consumption of resources, the quantities of waste generated and the degree of unsustainable land use appear likely to continue growing.

The reasons for the environmental protection are by and large, the re-analysis of facts and theories in the ongoing ecological debate. Since 'ecology' is that branch of study that concerns itself with mutual relations between organism and environment, our attention here will be restricted to the discussion on the politico-legal ecological consequences of man-made changes on the environment and those of other organism-both living and non-living.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- Understand the scope of environmental protection
- Understand the specific environmental protection programmes

- Explain the reason for environmental protection

3.0 MAIN CONTENT

3.1 Scope of Environmental Protection

The aim of environmental protection is therefore to prevent, halt and reverse environmental degradation through the appropriate use of biotechnology in conjunction with other technologies, while supporting safety procedures as an integral component of environmental development. To this end, specific environmental protection programmes with specific targets has been suggested to be inaugurated with specific objectives which include:

(a) To adopt production process making optimal use of natural resources, by recycling biomass, recovering energy and minimizing waste generation;
(b) To promote the use of biotechnologies, with emphasis on bio-remediation of land and water, waste treatment, soil conservation, reforestation, afforestation and land rehabilitation;
(c) To apply biotechnologies and their products to protect environmental integrity with a view to long-term ecological security.

To appreciate the need for environmental protection, it will be worth-while to discuss the reasons for environmental protection and the argument advanced in favour of each in an attempt to arresting environmental degradation.

3.2 Reasons for Enviromental Protection

The reasons for environmental protection are usually expressed in the form of loss of amenity, health hazards, survival and resource depletion.

(i) Amenity loss

The ordinary meaning of the word ‘Amenity’ is “the quality of being pleasant, something that tends to make life more comfortable, adds to the convenience of a place, increases the delightfulness of an area, etc. “In law, especially in real property law, it refers to such circumstance, in regard to situation, view, location, access to a water course, or the like, as to enhance the pleasantness or desirability of the property for purposes of residence, or contribute to the pleasure and enjoyment of the occupants, rather than to their indispensable needs.” Amenity is therefore that intangible or incorporeal rights or qualities provided by nature that helps in bringing out the beauties of environment which in

turn enhances the pleasure, enjoyment and delightfulness of the people living within it.

Applying it to the issue of environmental protection, it refers to the ecological analogue to conservationist arguments that Mother Nature's beauties ought not to be marred. It is more of an appeal for appreciation and preservation of the natural resources of the environment. It is this conservationist argument advanced by politically minded ecologists that has been described as an 'amenity argument'.

One problem of this amenity argument is the possibility that one man's amenity may be another man's disamenity. In this connection, whereas someone may complain of the nerve-shattering noise of the city, others may regard the din as an exhilarating contribution to the excitement of city life. The same may also go for the location of an industry within a community. Most residents of a location would be disgusted by the prospect of smoke from a proposed industry, but, on balance, there are others who may be willing to accept it as the price the community must pay for economic prosperity. It is evident that smoke or pollution is undesirable. Equally true is the fact that the only disagreement is to how unpleasant it is and what sacrifices are in order to prevent it and not that polution and prosperity are linked, for if people should have their way, they would prefer both clean air and economic prosperity. The task of the ecologist, using amenity argument is therefore to demonstrate that smoke is an unnecessary by-product of an industry which may be prevented by, for example, precipitators in smoke stacks. This abatement equipment helps the community to gain the best of both worlds and preserve the amenity argument for the protection of the environment.

To achieve this goal and in order to drive a wedge between environmental disamenities and other amenities, it has been suggested that, the ecologist must depend upon the possibility of technological modification of the production process (Goddin, 1976). Thus, the existence of industry can bring prosperity without smoke or pollution only because there exists a piece of hardware, a precipitator, which removes most particulate matter from emissions. Since there are no solutions to pollution problems, any community committed to the goal of industrialization should be aware that technology will not save it from environmental repercussions of that decision. This strengthens the amenity argument for environmental protection as the best option available to human race.

(ii) Health hazards

Cleanliness, it is said, is next to godliness. By this saying, it is evident that filth and odours are somewhat connected with disease. So, healthy environment promotes healthy living. This is in line with the submission that before the mid-19th century when bacteria causes of disease become identifiable and controllable, the only available method for promoting public health was to sanitize the environment generally (Goddin, 1976). This shows that environmental protection is necessary to prevent health hazards.

To be more specific, breathing air polluted with particulate matters can cause a variety of pulmonary disorders and certain cancer – e.g. Cancer of the lungs. It may be distinctly dangerous to drink water even when bacteria and organic chemicals are removed because of concentrations of certain inorganic chemicals added by factories. In the same vein, loud noises most certainly impair hearing. The effect of pollution according to Goddin (1976) on human health is stated in the following ways:

"In more subtle ways, pollution can be even more dangerous to human health. Mercury dumped into the sea finds its way into the tissues of fish and are transferred into man when the fish are caught and eaten of men. DDT and other pesticides wash off crops and into the oceans with the same result even when their impact is not more direct. These poisons build up in a man's tissues and may take years to produce noticeable effects making them all the more dangerous."

The medical effects of pollution may be even more pronounced as regards mental health. Crowding, ugliness and noise especially have deleterious impacts on a man's psyche. These may, in turn be reflected in physical illness such as ulcer and 'social diseases' such as increased crime and vandalism (Paul and Anne, 1972).

It should be noted that there is no technological solution to pollution problems, and there is no way to avoid a show-down between a healthy environment and all the counter balancing disadvantages of an unhealthy environment. Since health is wealth, protecting the environment to prevent health hazards in order to protect human health cannot be overemphasized, hence environmental protection.

(iii) Survival

The survival argument for environmental protection grows out of the public health concern. This reason suggests that abuse of the environment is so tremendously unhealthy that the continued existence

of human life on earth is in danger. It is no longer news that all human beings depends on the environment for provision of certain basic natural requirements to sustain life. Such requirements include but not limited to the appropriate temperature, adequate oxygen, food, water, air, etc.
One of the problems facing the survival argument for the protection of environment is that many people do not believe that the magnitude of environmental damage is such that the survival of man is in doubt, although they admit that certain things man does to the environment makes it a less healthy place to live. The reason for this attitude is anchored on the fact that biosphere is characterized by self-renewing and self-cleaning mechanisms. Such arguments are that particulate matters thrown up into the air as factory smoke will naturally descend again in rain and the atmosphere remains unaltered. Likewise, a river or an ocean will naturally cleanse itself of pollutants (Goddin, 1976).

It is interesting to note that such reason does not take into consideration the quantitative limits to the biosphere capacity for self-renewal. Moreover, only a certain fixed amount of pollutants will naturally be removed from environment. Anything in excess of these limits will stay in the atmosphere, river or ocean and cannot be removed naturally. The survival argument for environmental protection seems to say therefore, that human wastes now breach the capacity of the environment for self-renewal and that, without human intervention, harmful residuals are bound to accumulate in the ecosphere (Scorer, 1973).

Certain reasons have been advanced for the breach of the capacity of the environment for self-renewal:

(a) *Modern technology:* Increasing reliance on modern technology adds to the environment's difficulty in cleaning itself by substituting artificial substances for natural ones. These synthesized materials are often not 'bio-degradable'. In other words, nature cannot decompose the substance into its basic constituents. For example, glass is for all practical purpose immune to natural recycling process, while a paper can be decomposed into humus. However, in some cases, technological advances have made certain things hitherto non-biodegradable, e. g. plastic.

(b) *Population increase*: The pressure of increasing populations has press to the limits the earth's capacity for self-renewal. The population increase has made it more difficult for the natural environment to manage each individual's wastes.

(c) *Climatic modification:* This centred on the inadvertent climatic modification due largely to the activities of man e.g. introduction of particulate matters into the air in the form of smoke which have some effect on the climate.

On the whole, the argument for survival as one of the reasons for environmental protection is futuristic in outlook. This means that the threshold will be crossed at some future date if present practices continue. In other words, it is both a prediction and an appeal. But the prediction will not come true if the appeal succeeds in persuading men to alter present practices to preserve the environment and to protect it from further deterioration.

(iv) Resource depletion

The resource depletion reason for the protection of environment is a direct uprrot of the Malthusian theory expounded in 1798. In its basic form, the argument suggests that demands on resources grow exponentially while supplies increase, only linearly.

The ecologists have computerized available evidence and now also able to use the exponential growth analysis to suggest that exhaustion of resources is imminent. One reason for the argument for resource depletion it the rate of consumption of the available resources due largely to increase in population. This shows that the only way to diminish demand for food and all other resources required to sustain human life is to decrease the number of people demanding same. This accounts for the tree planting campaign of the Federal Government of Nigeria and the pegging of number of children per couple to a maximum of four by the Babangida administration. The implementation or enforcement of these laudable policies on the part of the government is another uphill task.

4.0 CONCLUSION

In conclusion, no matter what the threat to the environment is thought to be, it can be turned back only by a broad-based attack on the causes of pollution. Controlling the disamenities and health hazards resulting from environmental deterioration requires the same sort of anti-pollution campaign as is required if the issue is how to help mankind survive and conserve his natural resources.

5.0 SUMMARY

In this unit, we have discussed the scope and reasons for environmental protection. From this the learner would be able to understand the desire for a secured environment germane to sustainable development and good quality living.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Highlight the specific environmental protection programmes with specific targets that have been suggested to be inaugurated with specific objectives.
2. State the reasons been advanced for the breach of the capacity of the environment for self renewal.

7.0 REFERENCE/FURTHER READING

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UNIT 4 THE IMPORTANCE OF ENVIRONMENTAL LAW

CONTENTS

1.0 INTRODUCTION

The problems of national development today have made it very imperative to take special interest in the health of the environment. National development as we all know impacts on the environment, often times in negative ways such as pollution, deforestation, erosion, etc. In order to safeguard the environment, it behoves that laws to protect the environment should be brought to the fore hence the importance of environmental law.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- Understand law and its urgent need of development for the environment
- The need for and the importance of environmental law

3.0 MAIN CONTENT

3.1 Law and Urgent Need of Development for The Environment

One area on which law as a discipline is in urgent need of development is that of the protection of the environment and the problems of maintaining sustainable development (Singh 1989). It is on the strength of this that the World Commission on Environment and Development stated that:

(i) to recognize and respect reciprocal rights and responsibilities of individuals and states regarding sustainable development;
(ii) to establish and apply new norms for state and interstate behaviour to achieve sustainable development;

(iii) to strengthen and extend the application of existing laws and international agreement in support of sustainable development; and
(iv) to reinforce existing methods and develop new procedures for avoiding and resolving environmental disputes (WECD, 1987).

The above statement attributed to the World Commission on Environment and Development has shown that in recent years, environmental concerns have gradually come to be viewed not in isolation but in relation to socio-economic development. Besides, it is now fully recognized that no country of the world can afford to ignore the sound management and protection of its environmental resources which form the basis of sustainable development. The rising concern with environmental issues can be attributed to an increasing realization of the dangers posed to human life and prosperity by unabated degradation of our basic resources of land, water, air and vegetation in man's quest for development. This shows that effective environmental management and protection provide a basis for sustainable economic and social development.

Besides, the process of national development today entails finding solutions to the problems of health, human settlement, educational and cultural uplifitment, and planned exploitation of the natural resources for a better and more meaningful life. In the process of development to achieve these objectives, it seems too difficult to strike a healthy balance between the development objectives and a wholesome environment and yet, man is aware that every development effort affects the environment in a particular way and that the need for survival dictates that it is always necessary for an optimum balance to be struck and maintained between the activities of man and his environment.

Furthermore, environmental troubles have a way of travelling from one neighbourhood to the other. Foul air easily blows across borders, and dirty water moves swiftly downstream. But a true ecological disaster, as Eugnen Lindem puts it, is the ecomigrants who cross borders and threaten the security of nations. In his words:

> The late 20th century has seen the revival of a phenomenon common in ancient times; ecomigration. Such forces as land degradation and population pressure have driven migrants from Somalia into Ethiopia, from Ethiopia into Sudan, from Burma into Bangladesh and from Bangladesh into India. As many as 20 million people a year are reluctant nomads, and their ranks could grow much longer. Ecomigration shows how the environment could become an issue not just of national health but also of national security (Linden, 1997).

So the issue of environmental crises has gone beyond the fouling of air and water and includes, but not limited to national security. This means that these ecomigrants after crossing the national borders of any nation becomes security risks to the national or government of such country. Ecomigration within the boundaries of a nation could grow much worse in the future because of climatic change. As global warming swells the seas and increases the frequency and severity of coastal storms, a modest seas level rise of one meter would force thousands of people to leave their settlements in lowlands to uplands. This seems to be the submission of Eugene Linden when he stated that "no country can build an unbreachable wall around itself. The image of vast armies of wretched poor, surging around the globe and clamouring at the borders of the more fortunate nations, may finally awaken the world to the kind of future that today's leaders may be foisting on the next general (Linden, 1997).

It is therefore seen that law occupies a vital place in the protection of the environment from degradation. Although, environmental law is a relatively new area due largely to the fact that, mankind had been solely interested in exploiting the resources in his environment with which nature has endowed him without much thought about the future consequences of such exploitation and use, it has now been realized, due to the efforts of environmentalist, that the health, if not the very existence of mankind, stands threatened unless efforts to protect the environment receives serious attention through the instrumentality of law.

On April 22, 1990, more than 200 million people from 140 nations joined hands in the celebration of 'Earth Day 1990' in one of the largest demonstrations in history. The participants spent the day planting trees, protesting industrial pollution, learning how to recycle waste, and calling out to world leaders to pass new laws to protect the planet's environment. Earth day 1990 was an event that had a lot of significance for the people of the world because it was an opportunity for the people to have expressed concern about the state of the environment. The goals and aspirations of Earth Day 1990 were perhaps best expressed by Denis Hayes when he stated that: 'Let the historians record that on Earth Day 1990, the people (from over the world) have heard the cry of the earth and (we) have come to heal her.'

In Nigeria, at least over a decade ago, there has been a reawakening of interest in the protection of the environment, especially with the dumping of toxic waste in Koko area of the then Bendel State in 1988. The consequence of this dumping was the enactment of the Harmful Wastes (Special Criminal Provision, etc.) Act and the Federal Environmental Protection Agency Act respectively.

The list of environmental problem plaguing the earth is long and growing. Amongst these are soil erosion, smog-filled air, polluted water, global warming, acid rain, deforestation, hole in ozone layer of the atmosphere, vast and growing mountains of garbage, desertification of once arable lands, noxious leftover of toxic and hazardous waste products of the industrial age, a growing number of endangered animal and plant species facing extinction, etc.

3.2 The Need for and The Importance of Environmental Law

The need for and the importance of environmental law can be seen when we look at the environment not as a static configuration of the earths' surface, but as a dynamic system over which man in his quest for a livelihood plays a vital role. The question therefore is how do we channel and control man's activities within the ecosystem in order to ensure an increasing output for man and at the same time, maximize his welfare? This is where law comes in to regulate the activities on the earth. This can be done by the government or the people in authority by passing legislations regulating the disposal of toxic wastes and the clean-up of contaminated sites. It will extend to laws compelling industrial establishments to handle and dispose of dangerous wastes, providing for incineration and stabilizing techniques to replace wanton dumping of dangerous materials into the environment.

Environmental law is therefore concerned with not merely raising the standard of living but providing basic tools to tackle the environmental problems. In other words, protecting the environment is so important that law can no longer close its eyes no matter the cost, for environmental improvement must be made regardless of the cost. There is therefore a dire need for law that can effectively and efficiently address itself to the problems posed by the activities of man with a view to enhancing the quality of life of the people and to guarantee a sustainable development.

Environmental law also plays a vital role in protecting the environment when we realize that living things sometimes influence the non-living part of the environment and cause changes in it. The changes might be good or bad. In turn, the environment and events in the environment sometimes change the lives of living things. These changes, too, might be good or bad. Because living thing change the environment and the environment changes living things and, because the change in environment affect human life one way or the other, it is imperative to study the legal implications of the activities of human beings one the environment as it affects other things (both living and non-living things) with a view of regulating them through the legal process.

Environmental law therefore deals with the issue of providing regulation for controlling the emission of smoke from houses and cars, preventing industrial pollution of the environment and the rivers, restricting the use of dangerous chemicals and the general philosophical orientation through law, entailing the conception of land planning for a liveable environment. In a nutshell, it is a body of statutory laws and procedures enacted with the view of protecting the environment and to provide, so far as possible for clean air, and clean land – it is the law that deals with the protection of environment and sustainable development.

From the preceding paragraphs, the following salient points emerged as the importance of environmental law in the society:

1. It provides a healthier and hygienic living standard for residents through the enforcement of sanitation exercises. In this way it reduces the sickness rate and death toll in our society.
2. It reduces the rate of pollution in the environment by prohibiting the dumping of refuse indiscriminately in the environment.
3. It protects our forest from going into extinction by prohibiting the indiscriminate felling down of trees and other games in the forests.
4. It contributes in no small measure to growth and development of the town and settlement by insisting on the development pattern based on the provisions of the Town and Country planning law.
5. It insists on good drainage system in town planning and this goes a long way to solve the problems of city or urban flooding and erosion.
6. It helps to provide remedies for the already existing environmental problems by suggesting methods which can be used in solving them.
7. It helps to educate the populace on the consequences of an endangered environment and how to live a healthy life.
8. It regulate and determine relationship between individuals in the society so that grievances arising a s a result of one person's act or omission can be properly dealt with in order to obtain redress for harm or negligence or nuisance occasioned thereby.

4.0 CONCLUSION

It is pertinent to state that national development today entails the searching out of solutions to problems of health, human settlement, educational and cultural upliftment and planned exploitation of the natural resources for a better and more meaningful life. Environmental law therefore, deals with the issues of providing regulations for a sustainable and liveable environment.

5.0 SUMMAY

The importance of environmental law cannot be overemphasized. Generally, it provides regulations curtailing environmental degradation thereby providing a healthy living environment.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Highlight the views of the World Commission on Environment and Development (WCED) on maintaining sustainable development.
2. Enumerate the importance of environmental law in the society.

7.0 REFEREES/FURTHER READING

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MODULE 2

UNIT 1 SOURCES OF ENVIRONMENTAL LAW

CONTENTS

1.0 INTRODUCTION

Generally, the coming into effect of laws is important in any society than the need for the sources of such laws. It is at this point that this unit is set to discuss the sources and scope of environmental law to Nigeria.

The nuptials of the two concepts that is, law and the environment cannot be overemphasized in the socio-economic development of any nation, then the need for the sources of this law to be discussed.

The scope of the law varies from one jurisdiction to another, and some other jurisdictions will also be looked at critically. The main sources of environmental law like the international treaties and convention cannot be ignored; it is also of main concern to discuss the role of the constitution of the FRN.

2.0 OBJECTIVES

By the end of this unit, you should be able to:

- explain and analyse international treaties and the Constitution of the Federal Republic of Nigeria as sources of environmental law in Nigeria.

3.0 MAIN CONTENT

3.1 Sources of Environmental Law

It is pertinent to reiterate that before the advent of the 1988 Federal Environmental Protection Agency Act No. 58, there was no concise law to protect the environment or referred to as the National Environmental Law.

Unlike most areas of the law, environmental laws are greatly influenced by policy choices and ideas drawn from other disciplines such as biology, chemistry, economics, forestry, natural resources, fisheries, engineering, etc.

It is however important to reiterate that the content of environmental law for Nigeria is broad and extensive. It encompasses the problem of Land Use and soil conservation, Forestry – wildlife and protected natural areas; water management, marine resources and coastal areas, sanitation and waste management, air quality, hazardous substances, working environment – occupational health and safety, major sources of pollution/pollutants includes water pollution, air pollution, auto mobile emission and noise pollution, land degradation and planning matters of afforestation and deforestation and desertification among others. All these areas mentioned in a Federal setting like Nigeria, the Federal and State have the rights to enacts laws which seek to regulate and protect the environment either directly or indirectly. (Akintayo, 2006).

The sources of Nigerian Environmental law includes: the Constitution, Legislation, Judicial precedents or Nigerian case law, the received English Law, Customary Law, and Islamic Law. These are the general sources of the Nigerian Law and the ingredients of Nigeria legal system at a glance but in the present dispensation not all these sources are relevant to the concept of Environmental Law.

International Law

International law as one of the major sources of environmental Law, the need to protect the environment cannot be ignored in that regard. The United Nation Organization as an International organization meant to maintain the efficacy and efficiency of International law recognizes the sovereignty and individually of each state among the committee of nations.

It is imperative to note that, each state have rights in the international arena as its citizens claim rights within the nooks and crannies of its territory. The states have exclusive jurisdictional control over its

territory which includes territorial water, air and land territory, population and natural resources the rights over her territory cannot be tempered with by any state regardless of its acclaimed power in the committee of nations.

It is to this extent that may conferences, conventions, treaties and protocols were initiated to portect the world environment largely. Initially, from the emergence of UN, the environment was not a major concern, except for world peace but some of its agencies are saddled with such responsibilities relating to the environment, and these are the Food and Agricultural Organizations (FAO) and the World Health Organization (WHO) (Malcolm R. 1994).

However, in 1962 the first book relating to the environment that is a book that gave a graphic perspective views of the indiscriminate use of pesticides ”Silent Sprint” written by Rachael Carson. The book undeniably dealt into the area known as “Environmental Revolution” and laid a special foundation for emergent of law otherwise known as “Environmental Law”. (Atsegbua, 2003).

There have been a lot of global issues that has gingered the UN as a world organization to embark on various conferences, the ever increasing marine pollution, ground water contamination, europhication of lakes, dying forest and solid acidification and finally the global climate change, the greenhouse effect. These are one of the major incidents that led to the emergence of the UN Conference on the Human Environment, in Stockholm, in June 1972.

Significantly, the impact of the Stockholm Conference on the Human, Environment particularly, Principle 21, which stated that: “States have a responsibility to ensure that activities within their jurisdiction and control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction.

The principle equally admonished the States to develop their environment, their own jurisdiction in accordance with the tenet of International law even though there is need for them to compensate the victims of pollution and other environmental hazards caused by activities within their own jurisdiction or Control of such states outside their own jurisdiction.

There are other international treaties, protocols and convention that are of paramount important to the environment aside the Stockholm Conference; these are the international and Regional efforts in combating the environmental menace:

1. **The Universal Declaration of Human Rights 1948**; Article 25 (i) stipulated that everyone has the right to a standard of living adequate for the health and well being of himself and of his family, including food, clothing, housing and medical care.
2. **Convention on the prevention of marine pollution by dumping of waste and other matters, 1972**. This treaty was not ratified by Nigeria until 1835 April 1973. The treaty provides measures to prevent dumping of waste and other pollutants into the marine environment.
3. **International Convention for the prevention of pollution of the sea by oil 1954 (as amended in 1962 and 1969).** It was 22 April, 1968 that Nigeria assented to this treaty. The convention was aimed at preventing and curtailing the pollution of the sea. It prohibits the discharge of oil or oily mixture in the stated zones.
4. **Convention on the Continental Shelf 1958**, Nigeria acceded to this treaty on 28 May, 1971. The treaty recognizes and delimits the rights of states to explore and exploit the natural resources of the continental Shelf.
5. **The Convention on the High Sea 1958**: Nigeria acceded to the treaty on 30 September 1962. It is aimed at codifying rules of International Law relating to the high sea. “High Seas” according to Article 1, means “all parts of the sea that are not included in the territorial sea or in the internal water of a state”.
6. **United Nations Conference on Desertification (UNCOD)** held in Nairobi, Kenya in August/September 1977 -- Desertification addressed as a worldwide problem for the first time and a Plan of Action to Combat Desertification (PACD) adopted. Nigeria is a signatory to this treaty.
7. **United Nations Conference on Environment and Development (UNCED)** held in Rio de Janeiro, Brazil in June 1992 – The Earth summit 36 and Agenda 21 call on the UN General Assembly to set up an intergovernmental committee to prepare for a legally building instruction that addresses the problem of desertification.
8. **United Nations Convention to Combat Desertification UNCED** adopted in Paris, France in June 17, 1994 which has been earmarked as the world Day to Combat Desertification. This UNCED enters into force, 90 days after the 50th ratification is recovered.
9. **“Dumping of Nuclear and Industrial Wastes in Africa”** organized by the council of ministers of the organization of African Unity, 48th Ordinary session, meeting in Addis Ababa Ethiopia, may 19 – 23, 1988, DECLARES that the dumping of nuclear and industrial wastes in Africa is a crime against Africa and the African people etc.

10. **OAU Convention Banning Outright Import of All Forms of Toxic Wastes into Africa and controlling Trans –boundary Movement of such waste generated in Africa** –signed in Bamako, Mali on 30th January 1991. The main objective was to prevent the importation of all forms of toxic waste within Africa and the movement of toxic waste within Africa.
11. **Convention for cooperation in the Petroleum and Development of the Marine and Coast Environments of West and Central Africa** – which came to force on 5 August 1984 with the objective of protecting the marine environment of coastal zones and related internal waters falling within the 37 jurisdiction of the states of the West and Central African Region. This was ratified by Nigeria on the 5 August 1984.
12. **Treaty Banning Nuclear Weapons Tests in the Atmosphere in Outer Space and Disarmament** under strict international control, in accordance with U.N. objectives. This was ratified in December 1967.
13. **African Charter on Human and People's Rights.** This charter was signed and ratified by Nigeria on 31st August 1982 and 22 June 1983. However, it came into force in Africa on 21 August 1986.
14. **Vienna Convention for the protection of the ozone layer 1985** which came into force on 10 August 1992. The main objective is to protect the ozone layer by taking precautionary measures to control global emissions of substances that deplete it. This was ratified by Nigeria on 1 January 1989.

    15. International Conference on the Establishment of an International Fund for compensation for Oil Pollution Damages which came into force on 16 October 1978.
16. **Rio Declaration on Environment and Development** All the above treaties and conventions are parts of the key sources of the concept of Environmental Law. In addition, out of about eighty five international environmental conventions that are applicable to the country, she has signed 38 and ratified less than half of the number just about thirty six and the rest, may be, the Federal government is yet to make up its mind to sign and ratify the decision or not. And the position of the constitution of the Federal Republic of Nigeria 1999 is very clear.

3.2 Constitution of the Federal Republic of Nigeria.

This is the grundnorm of any nation and it plays a significant role as one of the sources of any law relating to people. The Constitution is the supreme law of a state. It directs the process of governance, specifies duties and functions of different arms of government portrays fundamental rights and obligations of citizens.

All other laws derive their relevance from it, any law inconsistent with provision of the constitution is void to the extent of its inconsistency (Jenwo Yalaju 2007: 35). A constitution is nothing but an institution of government made by the people, establishing the structure of a country, regulating the powers and functions of government, right and duties of the individual and providing remedies for unconstitutional Acts.

Naturally, there have been a whole lot of environmental menace that most environmentally conscious countries, have handled through legislative action; some countries have given these problems constitutional status for the state to 39 deal with, most of the third world countries have enacted laws to minimize the menace, Nigeria, South Africa, Mali, India, Chile just to mention a few.

As we have seen that Nigerian as a nation has paid leap service to the environment through the sustainable development programme, even in the 1979 Constitution which came after the Stockholm Conference of 1972, not until the events of the 1980s that paved way for the inclusion of the Environmental objectives in the constitutions. This clause is to be seen in section 20 of the 1999 Nigerian Constitution in consideration of the importance of the environment to human beings. And it states that:

> "The state shall protect and improve the environment and safeguard the water, air and land, forest and wildlife of Nigeria."

This is however the first time that the need to protect the environment would be specifically mentioned in the constitution (Akande, 2000).

Other nations also deal with the issue of the environment in their constitution like Nigeria, in Ghana the 1992 constitution of the Republic of Ghana particularly chapter 6 deals with the Directive Principles of State Policy, as part of the social objectives of Ghana in its Article 36(7). It is important that with the provision of the Ghanaians constitutional provision is more broad and down to earth than the 1999 Constitution of Nigeria.

Moreover, S15 of the 1992 Mali Constitution provided that: person has a right to a healthy environment. The protection and defence of the environment and the promotion of the quality of life are a duty for all and the state. In a similar vein, S 46 of the 1992 constitution of the Democratic Republic of Congo (DRC) provides: Every citizen shall have the right to a satisfactory and sustainable healthy environment and shall have the duty to defend it. In addition, Section 24 of the Constitution of the Republic of South Africa 1996 is more elaborate than the Malian and DRC clause.

It is imperative to note that the significance of ensuring environmental rights in national constitutions has been highlighted by Ogola (1995) who stated that: The Constitution of a country constitutes the first and primary level in its hierarchy of norms. Constitutional provisions inter-alia, underline national priorities and hence determine the decision and nature of future legislative policies and executive actions. The elevation of environmental concerns to constitutional status in these countries has no doubt enhanced the priority to be accorded by Government on sound environmental management and sustainable development.

However, the inclusion of environmental clause into the CFRN 1999 can be said to be a milestone in the quest for the protection and sustainability of the Nigeria environment. Though, the clause in S20 of the constitution is far from meeting 41 the yearning and expectations of the environmentalists. This is as a result of the fact that the constitution has not given adequate recognition to the environmental rights and healthy environment as a fundamental right.

There have been a lot of judicial interpretations of section 20 of the Constitution. This was first made in the decided case between ***Attorney General Lagos State vs. Attorney General of the Federation & Ors (2003). Kalgo JSC*** in his concurring judgement on pages 177 to 179 noted inter alia that the main object of Section 20 is to protect the external surroundings of the people and ensure that they live in a safe and secure atmosphere free from any danger to their health or other conveniences. He opined further that the provisions of the section do not give the National Assembly the power to legislate on planning and development control over land in the states or local governments.

A new dimension to all states responsibility is by obliging the state to protect, improve and sustain the environment for the good of the society as a whole. The state is also obliged to direct its policy towards the control of marital resources of the community to observe the common good, the need to improve the human life by controlling the exploitation of natural resources and protection of environment. This lead to the inclusion of environmental matters in various constitutions of most countries of the world and in turn made the constitution one of the vital source of environmental law.

4.0 CONCLUSION

It is imperative to reiterate that sources of environmental law cannot be ignored in any discussion that is related to it. Legislation and International law are very important sources of Environmental law.

5.0 SUMMARY

In summary this unit has discussed the sources of environmental law in Nigeria such as international conventions and treaties, and the constitution of the Federal republic of Nigeria. Learners of this unit should be able to discuss these sources of environmental law in Nigeria.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Explain the basic concepts of International convention and treaties.
2. Write full note on the constitution of the Federal Republic of Nigeria

7.0 REFERENCES/FURTHER READING

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UNIT 2 SOURCES OF ENVIRONMENTAL LAW IN NIGERIA

CONTENTS

1.0 INTRODUCTION

Generally, the coming into effect of laws is important in any society than the need for the sources of such laws. It is at this point that this unit is set to discuss the sources and scope of environmental law to Nigeria.

The nuptials of the two concepts that is, law and the environment cannot be overemphasized in the socio-economic development of any nation, then the need for the sources of this law to be discussed.

The scope of the law varies from one jurisdiction to another, and some other jurisdictions will also be looked at critically. These sources of environmental law cannot be ignored.

2.0 OBJECTIVES

By the end of this unit, the learner should be able to:

- understand the concept of State laws in relation to environmental law.
- understand the concept of case laws with respect to environmental law.

3.0 MAIN CONTENT

3.1 Sources of Environmental Law

It is pertinent to reiterate that before the advent of the 1988 Federal Environmental Protection Agency Act No. 58, there was no concise law

to protect the environment or referred to as the National Environmental Law.

Unlike most areas of the law, environmental laws are greatly influenced by policy choices and ideas drawn from other disciplines such as biology, chemistry, economics, forestry, natural resources, fisheries, engineering, etc.

It is however important to reiterate that the content of environmental law for Nigeria is broad and extensive. It encompasses the problem of Land Use and soil conservation, Forestry – wildlife and protected natural area; water management, marine resources and coastal areas, sanitation and waste management, air quality, hazardous substances, working environment – occupational health and safety, major sources of pollution/pollutants includes water pollution, air pollution, auto mobile emission and noise pollution, land degradation and planning matters of afforestation and deforestation and desertification among others. All these areas mentioned in a Federal setting like Nigeria, the Federal and State have the rights to enacts laws which seek to regulate and protect the environment either directly or indirectly. (Akintayo 2006).

The sources of Nigerian Environmental law includes: the Constitution, Legislation, Judicial precedents or Nigerian case law, the received English Law, Customary Law, and Islamic Law. These are the general sources of the Nigerian Law and the ingredients of Nigeria legal system at a glance but in the present dispensation not all these sources are relevant to the concept of Environmental Law.

3.2 State Laws

Statutes or state laws mean the law made by the organ of government whose primary duty is to make law for the state. Laws made by this body (legislative arm) are known as statutes or legislation. Nigerian legislation consists of statutes and subsidiary legislations. However, it is imperative to note that Subsidiary legislation is the statutes made in the exercise of powers given by a statute. It could also be referred to as delegated legislations.

Moreover Nigeria statutes consist of ordinance, Acts, Laws, Decrees and Edicts. Ordinances are laws passed by the Nigeria Central Legislature before October 1, 1954 which ushered in a Federal Constitution into Nigeria (Obilade, 1998). A statute enacted by the Federal Legislature (the National Assembly comprising of the Senate and the House of Representatives) is an “Act”. The statute made by the House of Assembly of a state is called “Law”. However, in a military administration, an enactment or promulgation made by the Federal

Military Government is known as a "Decree" and the one made by the Government or Military Administrator of a state is known as "Edict".

Note that all existing Federal Statutes in Nigeria up till 1990 have been consolidated in Laws of Federation of Nigeria (LFN) 1990. The collection of these decrees and Edicts are invaluable source of Nigerian Law (Sanni, 1999).

There have been a lot of statutes that were enacted before the 1988 Koko incident which are environmentally related, under the military and the civilian regimes and they include the Petroleum Act, the Oil Mineral Act, the Factories Act and the Criminal Code. Then following the Koko incident, more cognisant efforts has been made to tackle environmental problem through some specific legislations and they include, Harmful Waste (Special Criminal Provisions) Act 1988 and the Federal Environmental Protection Agency Act Cap 131 LFN 1990.

It is important to reiterate further other state laws used in combating the menace of environmental degradation and pollution:

1. The Oil in Navigable Waters Act 1968 – enacted as a result of the International Convention for Prevention of Pollution of the Sea in 1954, it is the most comprehensive legislation on oil pollution.
2. Oil Terminal Dues Act Cap 339 LFN 1990 – it provides for the discharge of oil at oil terminal.
3. The River Basin Development Act – it is provided for the supply of water.
4. Environmental Impact Assessment Act No 68 1992 – it is provided for projects that is likely to have an adverse impact on the environment to be subjected to environmental impact assessment.
5. Management of Solid and Harmful Waste Regulation – it regulates the collection, treatment and disposal of solid and hazardous waste from municipal and industrial sources.
6. Associated Gas Re-Injection Act Cap 26 LFN 1990
7. The Environmental Sanitation Edict No 4 of 1987 (Lagos State) No 4 of 1986 (Oyo State)
8. The Pollution, Prevention and Control (Miscellaneous Provision) Edict of Imo State, 1985

3.3 Case Laws

Naturally, the courts are saddled with the responsibilities of interpreting the state laws and international conventions once an issue to that extent has arisen. However, the role of case law in this respect is best appreciated where there is judicial activism and judicial precedent. It is

also important to say that the law is what the court says it is. The case law is a source of Environmental law in Nigeria and at the international terrain. In Adediran vs. Interland Transport Ltd (1986) 2 NWLR Pt 20 Pg 78, where the court held that the consent of an Attorney-General is no longer necessary for the competence of action in public nuisance.
Note that the riparian doctrine was also applied in Nigeria as it is a common law doctrine, a landowner has a right to the water which flows, across his land and his right to use the water should be reasonable. In Braide vs. Adoki (1931) 10 NLR 15

In ***Isaiah v Shell Petroleum Company of Nigeria Limited (2001),*** a case decided on the basis of S239(1)(a) of the Constitution (Suspension and Modification Decree No 107 of 1993, the Supreme Court decision in this case laid to rest finally what position of the laws is with respect to jurisdiction in oil pollution by deciding that, the subject matter of the claim, which is oil spillage falls under the exclusive jurisdiction of the Federal High Court as provided for under the earlier mentioned section. The nature of proof of environmental claims is favourable obstacle which the claimant(s) must summon before he can succeed. This nature of proof principle was well elucidated in the case of ***Ogiale & 2 Ors vs. S.P.D.C. (1997).***

It is important to note that the role of courts to interpret the law and the outcome of it – case law is best appreciated where there is judicial activism.

4.0 CONCLUSION

It is imperative to reiterate that sources of environmental law cannot be ignored in any discussion that is related to it. State laws and Case laws are very important sources of Environmental law.

5.0 SUMMARY

In summary this unit has discussed State laws and Case laws as sources of environmental law in Nigeria. Learners of this unit should be able to discuss these sources of environmental law in Nigeria.

7.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Explain the term Statutes in Nigerian law.
2. Discuss the role of Case laws as a source of environmental law in Nigeria.

7.0 REFERENCES/FURTHER READING

Obilade (1979): The Nigerian Legal System, Spectrum Books, Ibadan.

Winfield and Jolowicz (1998) on Tort, 15th Edition (London, Sweet & Maxwell) at 90

Kodilinye and Aluko (1999) The Nigerian Law of Torts, Spectrum Books, Ibadan.

Matt F. A. Ivbijoro et al, (2006), Sustainable Environmental Management in Nigeria Mattivi, Ibadan.

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UNIT 3

CONTENTS

1.0 INTRODUCTION

Generally, the coming into effect of laws is important in any society than the need for the sources of such laws. It is at this point that this unit is set to discuss the sources and scope of environmental law to Nigeria.

The nuptials of the two concepts that is, law and the environment cannot be overemphasized in the socio-economic development of any nation, then the need for the sources of this law to be discussed.

The scope of the law varies from one jurisdiction to another, and some other jurisdictions will also be looked at critically. This source of environmental law cannot be ignored. The common law approach through the doctrine of negligence and nuisance would be discussed in this Unit.

2.0 OBJECTIVES

By the end of this Unit, the learner should be able to:

- explain the doctrine of negligence.
- explain the doctrine strict liability.

3.0 MAIN CONTENT

3.1 Sources of Environmental Law

It is pertinent to reiterate that before the advent of the 1988 Federal Environmental Protection Agency Act No. 58, there was no concise law to protect the environment or referred to as the National Environmental Law.

More than most areas of the law, environmental laws are greatly influenced by policy choices and ideas drawn from other disciplines such as biology, chemistry, economics, forestry, natural resources, fisheries, engineering, etc.

It is however important to reiterate that the content of environmental law for Nigeria is broad and extensive. It encompasses the problem of Land Use and soil conservation, Forestry – wildlife and protected natural area; water management, marine resources and coastal areas, sanitation and waste management, air quality, hazardous substances, working environment – occupational health and safety, major sources of pollution/pollutants includes water pollution, air pollution, auto mobile emission and noise pollution, land degradation and planning matters of afforestation and deforestation and desertification among others. All these areas mentioned in a Federal setting like Nigeria, the Federal and State have the rights to enacts laws which seek to regulate and protect the environment either directly or indirectly. (Akintayo, 2006).

The sources of Nigerian Environmental law includes: the Constitution, Legislation, Judicial precedents or Nigerian case law, the received English Law, Customary Law, and Islamic Law. These are the general sources of the Nigerian Law and the ingredients of Nigeria legal system at a glance but in the present dispensation not all these sources are relevant to the concept of Environmental Law.

3.2 Common Law

Common law is the principle of law common to the whole of England while the doctrine of equity was evolved to mitigate the harshness of common law in order to do justice. However, all this laws was received into Nigeria in 1900.

The Law of Torts is the area of law under the common Law that mainly prescribes the control of environmental pollution. A tort is a civil wrong, which entitles the injured party to claims damages for his loss or seek an injunction for the discontinuance or prevention of the wrong.

There are four torts specifically relevant to the control of environmental pollution, that is, Negligence, Nuisance, Trespass and Strict Liability.

1. Negligence

The tort of negligence can be defined broadly as the breach of a legal duty to take care, resulting in damage undesirable by the defendant, to the plaintiff (Winfield and Jolowicz, 1998: 66).

There are three main elements to the tort that the plaintiff must prove:

a. A duty of care owed by the polluter to the plaintiff
b. The polluter is in breach of that duty of care
c. The breach has caused foreseeable damages to the Plaintiff

It is important that where the Plaintiff is able to prove his case successfully, the following remedies are available to him, damages and injunctions which may be mandatory or prohibitive.

2. Nuisance

A Nuisance is an inconvenience materially interfering with the ordinary comfort physically of human existence. However, under environmental law, Nuisance occurs when the emission of noxious or offensive materials from the defendant's premises significantly impairs the use and enjoyment by another of his property or prejudicially affects his health, comfort or convenience. Nuisance may be public or private. The same conduct lead to committal of both.

The remedies available to the plaintiff in this regard are damages, an injunction to restrain further nuisance and abatement. Nuisance may be public or private. The same conduct lead to committal of both.

a. Public Nuisance

A public or common nuisance can be described as an act which interferes with the enjoyment of a right which all members of the general public or a section of the public are entitled to, such as the right to fresh air, or travel on the highways. Public nuisance is basically a crime.

It is pertinent to note that before 1979 and under Common Law, however, actions based on the public nuisance can only be instituted he consent of the Attorney General of the Federation or that of the State as the case may be. Any action filed contrary to this principle/rule will be struck out as incompetent. This was the decision in ***Amos and Ors vs. Shell BP Petroleum Development Company of Nigeria Ltd. (1977) 6 Sc p9***.

Moreover, after the introduction of 1979 Constitution of Federal Republic of Nigeria particularly, the decision in ***Adediran v Interland Transport Limited (1986) 2 NWLR pt 20, 78***. It is interesting to note that, the consent of the Attorney General is no longer required for the competence of action in Public nuisance.

b. Private Nuisance

This type of nuisance is important but private nuisance are not crimes, but give rise to an action for damages which may be brought by the person who has suffered loss. It was described as "unlawful interference with a person's use or enjoyment of land and some right over or in connection with it ***(Abiola vs.Ijeoma 1970) 2 ANLR 768)***. The act of private nuisance include interference with an easement such as blocking up of a right to light enjoyed by the window of a house, acts of wrongfully allowing the escape of harmful things on to another person's land. See also ***(Tebite vs. Nigeria Marine & Trading Co. Ltd (1971) 1 U.L.R 432)***.

3. Strict Liability

Liability is strict in those cases where the defendant is liable for damage caused by his act, irrespective of any fault on his part. The Rule in ***Rylands vs. Fletcher (1986) LR Ex 265.*** The decision in this case established strict liability tort. The principle states that polluter is liable, irrespective of wrongful intent of negligence and in the words of House of Lords states:

> "We think that the rule of law is that the person who brings on his land, collects and keep there, anything, likely to do mischief if it 'prima facie' answerable for all the damage, which is the natural consequences of the escape".

It is important that for a Plaintiff to be successful or to rely on the principle as decided in the above cases, he must prove that there was a non-natural use of land by the defendant, he must show that there was an escape of materials or objects from the defendant's adjourning land to his property. Irrespective of the problems, the rule has no doubt been successfully applied in environmental law cases/litigations. Most particularly, those involving the oil sector, that is, oil spillages. (***Umudje vs. Shell-B.P Petroleum Development Co. of Nigeria Ltd (1975) 11 S.C 155).***

4.0 CONCLUSION

It is imperative to reiterate that sources of environmental law cannot be ignored in any discussion that is related to it. Common law is an important source of environmental law.

5.0 SUMMARY

This Unit has discussed extensively the common law as a source of environmental law in Nigeria. Learners of this unit should be able to clearly discuss this source of environmental law in Nigeria.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Explain with decided authorities the Nigerian approach to the rule of strict liability under common law as it relates to the environment in Nigeria.
2. Write full note on the tort of negligence.

7.0 REFERENCES/FURTHER READING

Obilade (1979): The Nigerian Legal System, Spectrum Books, Ibadan.

Winfield and Jolowicz (1998) on Tort, 15th Edition (London, Sweet & Maxwell) at 90

Kodilinye and Aluko (1999) The Nigerian Law of Torts, Spectrum Books, Ibadan.

Matt F. A. Ivbijoro et al, (2006), Sustainable Environmental Management in Nigeria Mattivi, Ibadan.

Atsegbua, L. et al (2003): Environmental Law in Nigeria: Theory and Practice. Ababa Press Ltd, Lagos.

NESREA (2007): Report of the first National Stakeholders' Forum on the New Mechanism for

Environmental Protection and Sustainable Development in Nigeria.

MODULE 3

UNIT 1 LEGAL ANALYSIS OF ENVIRONMENTAL PROBLEMS

CONTENTS

1.0 INTRODUCTION

Naturally, with industrial development all over the world then huge and every now and then damage is done to the environment. The natural environmental comprises of the sum total of all conditions and influences which affects the life and development of an organism, such as water, air, and land and inter – relationships which exist among and the elements of water, air and land and the human beings, creatures, plants, micro – organisms and property.

However, mankind is faced with the fact that the current rate of destruction might lead to a very bleak or even non-existent future for the earth and its inhabitant. The whole environment is been polluted because of human beings careless actions and the lack of a good attitude to maintain and sustain the environment we found ourselves.

It is important to continually reiterate that the purposes of protecting and improving the quality of the environment because increase in industry and in energy consumption were considered unavoidable for development.

However, preventing and abating environmental pollution, the standard for emission of discharge of environmental pollutant from the industries,

operations processes should be through legal framework. The hazardous substance and its related polluting element will be taken care of by relevant Environmental law.

2.0 OBJECTIVE

By the end of this Unit, the learner should be able to:

- explain the legal analysis of environmental problem.
- understand development and environment.
- understand effects of population and development.

3.0 CONTENT

3.1 Legal Analysis of Environmental Problems

It has been stated that every human being has been posited to have equal rights as it concerns the environment, however, world over the growing concerns about environmental problems in the upper atmosphere such as global warming and ozone depletion, here in Nigeria we are threatened in Nigeria by fundamental environmental challenges which include draught and desertification, coastal and land erosion, hazardous domestic garbage and industrial toxic waste, industrial and air pollution which has generated unpleasant social conditions, huge loss of life and means of livelihood" (Senator Grace F. Bent 2007:18 representing Adamawa State)".

It is also important to further reiterate that the hazardous bilge waters and emissions from industries includes heavy metals, carbonic compounds, radioactive substances and such other dangerous chemicals which cause harm to the health and environment of man, animals, trees and plants. Mortality and serious irreversible or incapacitating illness are the results of hazardous wastes" (Sengar, 2007).

Furthermore, attempt to proffers solutions to the various biting problems that affecting the world's both in the area of development and environmental pollution. The control and regulation of this range of problems is very essential. The basis and easiest way of achieving this goal is through efficacy of laws which provide the framework for such control and regulation.

The exertions by all countries all over the world have brought various conferences, treaties and agreement organized by the United Nations to come up with different environmental laws to twig the environmental pollutions. However, the nature of environmental problems in each state will definitely determines what nature of law to be enacted.

In the words of Yinka Omorogbe, he reiterated that the environment is the entirety of our society and life, as a result both poor and rich states make provisions for the control and regulations of their environment based on peculiarities of individual country's environmental problems.

In this regard, the problems facing the enforcement are laws for controlling, protecting and sustaining the environment and they need to be critically considered with the aim of proffering solution to the indentified problems.

3.2 Development and Environment

The word development is an everyday aspect of life and largely related to the environment. However, the word development means "the carrying out of building, engineering, mining or other operations in, on, over or under land or the making of any material change in the use of buildings or other land" which must be in line with Town and Country Planning Act 1990 Section 55.

The industrialized nations had started their own development ever before the establishment of the third world nations. The main issue is that development cannot take effect outside environment.

Environment to this extent is tantamount with development and pollution of it. Consequently, the problems created by the advanced countries that are highly industrialized ahead of the developing nation have made their own development very remote and retarded. To address this issue, of disparity and conflict of these interests made United Nations Organization came up with the "Action Plan and the Declaration on the Human Environment"

Brindland Report advanced a common solution to the problem of how to develop and sustain without necessarily injuring the surrounding/environment. This is seen as constituting development that meets the need of the present without compromising the ability of future generations. It is also defined as a requirement that the use of resources today neither should nor reduce real income in the future".

Hitherto, the energy use of the developing world is a faction of that of the industrialized nations, sustainable development in the area of energy use therefore appears also to require either total stagnation in the developing countries or an altruistic reduction of energy use by the industrialized world so that increases by developing world can be absorbed.

To substantiate this fact, Hunt, Bobeff and Palmer posited that:

> "No growth policies fashionable in some quarters and often in onesthat enjoy comfortable living standard are not favoured by those who find it difficult to meet their basic needs. These world countries will want to develop and will not be easily persuaded to abandon their traditional means of achieving that goal. The rest of the world will have to help these countries to achieve their goals in a way that is consistent with the policy of sustainable development while this may prove to be a costly exercise for the richer countries, they may be prepared to bear that cost in order to protect their environmental standards."

Particularly in the past the inclinations and the realities of the international economy a major and clearly devastating environmental disaster would have to be glaringly imminent before such sacrifices could be made.

3.3 Effects of Population on Development

- It could lead to environmental chasm - It leads to very low life expectancy and increase in birth especially in the third world with almost 75% of the globe population.
- The thrust for the development on the part of poor nations will meant more pressure on the environmental resources which are almost at the verge of exhaustion.
- This may bring to pass the prediction of the United Nation's that "The global population in the 2050 will somewhere between 7.3 billion and 10.7 billion" The difference between the high scenario and the low scenario is just one child per couple with the specie on that kind of demographic knife-edge, it pays for these couples to make their choice carefully."
- It will put more stress on infrastructures that are meant to add value to the populace.

4.0 CONCLUSION

In conclusion the legal analysis of the environment problem cannot be ignored in that regard. However, the conflict between the development and environment are equally discussed with the impact of population growth on the environment. It is also imperative to note the development of the environment is important to for sustainable development of any nation.

5.0 SUMMARY

In summary, it is important to note that this unit has discussed the legal analysis of the environmental problem, and also the development of the environment and the impact of the population on the environment.

Learners in that regard should be able to explain these points to a large extent.

6.0 TUTOR MARKED ASSIGNMNET (TMA)

1. Explain the role of development and the environment.
2. Briefly highlights the effect of population on environmental development.

7.0 REFRENCES/FURTHER READING

Atsegbua, L et al (2003): Environmental Law in Nigeria: Theory and Practice. Ababa Press Ltd, Lagos.

Ola, C. S, (1984): Town and Country Planning And Environmental Law in Nigeria, OUP, Jericho, Ibadan

Sengar, D. S (2007): Environmental Law Practices Hall New Delhi, India.

UNIT 2 SOCIAL AND CULTURAL VIEWS ON THE ENVIRONMENT

CONTENTS

1.0 INTRODUCTION

It is important to reiterate that the impact of political, social views on the environment cannot be overemphasized, so also the impact of Town and Country Planning on Environmental law in Nigeria.

The attitude of the populace to the environment cannot be ignored with a wave of hand; it is to this extent that this unit will boarder on the political, social views of the people on the environment, also the effect of this attitude on Town and Country planning. In Lagos, for example the role of the people and the government towards the Lagos Megacity project.

2.0 OBJECTIVES

The main objective of this unit is for learners at the end should be able to discuss the political and social views of the populace on the environment, and also the social cultural impact including the attitude towards the impact on Town and Country planning.

3.0 MAIN CONTENT

3.1 Socio-Cultural Effect on Environmental Law

Environmental issues are perceived diversely by the ordinary man on the street both in developed and developing nations all over the world.

Naturally in developed nations every resident of this nations is concerned and see all environmental issues as personal, the awareness in that regard is very thick and people are ready without been coerced to the care of the environment.

Pertinently everyone in the advance nations, need not be told about the impact of plastic bags and aerosol sprays are ozone friendly and act of writing paper is labelled a recycling process or not and cosmetics may be advertised as being free of chemical pollutants. All these are regarded as biodegradable and everyone is conscious of endangered species and the 'green – house effect'

Nevertheless, in most developing countries especially in Africa, this are issues that are strange to us, not just as a result of the fact that the government is indifference or a lack of the basic education required to understand such principles, but because the man is less concern to what happens to the environment even though he will be directly affected. Another main fact is that the average man lacks luxury and cannot afford the time, effort and expertise that environmental concerns entail.

The rich amongst them has the same attitude, by degrading the environment by building on the main canal or drainage that serves the community because he is influential and rich, he could block the main source of water to the community to benefit himself.

The tepid attitude of an average man to his environment in the developing country is what is translated into efficacious laws at the intergovernmental level. This concern about immediate well being is particularly given expression to in strategic plan such as Lagos Plan of Action.

Although, the average man will fight tooth and neck to ensure the citing of the industries in their areas because of the advantages that such industries will bring in addition to the development that will accrue to the area. The 'I do not care' attitude is not good with environmental protection and sustainability.

Therefore, the governments at all levels, the Non-governmental Organization, Human Right Groups need to sensitise the people more and give more knowledge every time in all these especially the degradation of our environment, then change our attitude and plant a tree regularly, in order to see the risk in a polluted environment tend to influence government policies, decision – making in environmental awareness matters and the resultant growth in the law.

The Lagos State government has been in the forefront of protecting the environment even more that the Federal Government, it holds regular seminar and awareness on the impact of the environment on the populace, it keeps sensitizing the people, our people for lack of knowledge lacks a lot, this government is the only that has a recycling center and also waste to wealth center in the whole country and also has a proper refuse disposal and try as much as possible sensitise the people on the issue of cleanliness.

It is not all that easy to spread this gospel of environmental law awareness among the less or lesser levels of existence that lack the physical and psychological factors required for effective environmental knowledge. The awareness campaign is only easily possible amongst the more comfortable segments of the society and this group constitutes a small percentage of the population. With the present situation in Nigeria, the societies are more aware through various campaigns on why we need to protect and cherish our resources. It is now pertinent that survival of human being is dependent on preserving nature. As a result, at all times, we are in ideal position to make a great contribution to the health and sustainability of the earth. We must impact on the environment positively at every event as this will go a great length in helping our planet. Therefore, people must as a matter of fact act in a responsive and responsible manner in every aspect of doing business and try as much as possible to include energy conservation, minimizing the consumption of natural resources, reducing waste and generally using earth –friendly products. Henceforth, the more we act responsibly, the greater the positive impact efforts will have on our environment (The Nation Daily Newspaper 2010: 5th February Vol. 2:29).

3.2 The Impact of Town and Country Planning

Environmental development controls and regulates the orderly planning and growth of any given country, city and town by emphasizing standards for all areas of planning.

The rule regulating town and country planning stipulates that there must be adequate light, well spacious environment, ventilation, recreation space for the children and elders, open space for social festivities, Country Health Centre and Estate or Community Market space. All these are important to any given city or town planning and also including residential, educational, industrial, commercial and agricultural areas are well and carefully zoned. This is to avoid conflict and avoid breach of peace and promote harmonious relationship.

Naturally, in improving urban design in Africa, it is essential that adequate standards of density, land use and utility services be established. City or Town Planning control is inevitable solely aimed at checking nefarious activities of developers, landowners, land speculators and estate quacks from building their houses as they like at the detriment of the public interest. The main fact is that a development plan cannot work in the absence of planning regulations.

Atsegbua L. et al (2003) states that in improving urban design in Africa, it is essential that adequate standard of density, land use and utility

services be established, that sand planning principles and techniques and a mature philosophy of contemporary aesthetic considerations be developed and that those and other urban factors should be related to the over-all development plan by preparing three-dimensional plans and models of the neighbourhood. Urban design is a social art that has its purpose the proper arrangement of the physical facilities that form our urban environment. It is an art and technique, which requires the freedom and enthusiasm of creative designers.

However, Oni (1984) posited that "Town planning is perhaps the oldest of the arts and the newest of the sciences. In modern practices before making plans, pictures and fine-looking models of how the future city will look – these has to be a careful diagnosis of everything that makes the term 'tick', that is, good road network, railways, industries, shops, houses, schools, health services and most important, its local administration. Once this diagnosis is done, a cure for the various ailments and maladjustments of the city can be prescribed in terms of the ascertained needs of the people and place itself. The plan ought to grow out of the city naturally".

In addition, a city is not an non-living object upon which any plan can be imposed – nor can it with impurity be hacked about or messed up by any kind of chaotic development that can be got away with as the case in most African countries especially Nigeria particularly cities or towns like Ibadan, Aba, Kaduna, Kano , Enugu etc.

It is important that before and after development approvals, architects, builders and contractors as well as developers must pay special attention to issues in this regard:

1. Building Line – nearness to roads or footpaths
2. Density Control – number of rooms to be built on a given land
3. Zoning - The type of buildings that could be created in a given area from a functional point of view, such as commercial, industrial, residential and recreational areas.
4. Orientation – sides to axis of the sun to catch prevailing breezes and cut off direct sunlight as much as possible.
5. Lighting – openings given, including the necessary air spaces to be observed.
6. Availability of amenities – kitchen, store, bathroom, toilets and drainage.
7. Facades – appearance from elevation and how harmonious the facades are in relation to other existing buildings.
8. Plot ratio – percentage of the land to be built on and percentage to be left undeveloped to provide open spaces and necessary greens.

The quantity and quality of materials used should be as such that will match with modern architectural designs. Lagos as a megacity has been in the news in recent times over collapsed building which has been embarrassing to the government from the hands of the money sucking developers, who are out to make money by all means and don't care of its impact to the environment.

Conservation experts of the United Nations Food and Agriculture Organization (FAO) tend to discount recent theories of global changes as the main reason for land loss. Despite such natural disaster as the Sahel drought. They maintain that most damage is either man – made or due to human negligence However, total rural population of the developing world, despite massive irrigation to cities is expected to grow by 900 million by turn of the country. At the World Desertification Conference in Nairobi, Kenya, global land loss from manmade causes was already estimated to cover an area bigger than the entire Saharan Desert. More than 680 million people were said to be living on land which could no longer support permanent cultivation or was in danger.

In Nigeria, where about 90% of the populations are farmers or nomadic herdsman, more than 20.6 million people live in the 15 percent of the country which is semi –arid. At least two – third of Kenya is classified as arid or semi –arid, yet land loss in continuing through new land clearing on fragile soils, bush fires and indiscriminate burning of trees and shrubs for charcoal.

4.0 CONCLUSION

In conclusion, it is important to reiterate that, the social and cultural view on the environment is important and the role of the urban planning on the environment cannot be overemphasized in that regard.

5.0 SUMMARY

In summary, this unit has extensively discussed, the social cultural views to the environment, the role of urban planning on the environment and learners are expected to critically discuss it.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Discuss the effect of population on development.
2. Explain the impact of the urban planning on the environment and its way forward.

7.0 REFERENCES/FURTHER READING

Atsegbua, L. et al (2003): Environmental Law in Nigeria: Theory and Practice. Ababa Press Ltd, Lagos.

Ola, C. S, (1984): Town and Country Planning And Environmental Law in Nigeria, OUP, Jericho, Ibadan

Ajomo A. O. and Adewale O. (1994): Environmental Laws and Sustainable Development in Nigeria,
Lagos. Nigeria Institute of Advanced Legal Studies, Lagos.

UNIT 3 NON COMPLIANCE AND ENFORCEMENT OF ENVIRONMENTAL LAW

CONTENTS

1.0 INTRODUCTION

Generally, people like to abuse the law by not respecting extant law and other people's right when it comes to issues in general and the environment is not an exception. The common believe is that the environment belongs to no one therefore; it is a free for all heritages to be exploited at will not minding its sustainability.

The attitude of the populace to the environment cannot therefore be ignored with a wave of hand; it is to this extent that this unit will dwell on the non compliance and enforcement of environmental law so also the enforcement constraints of these laws.

2.0 OBJECTIVES

The main objective of this unit is that at the end, learners should understand and be able to discuss Non- Compliance and enforcement of the environmental laws including the enforcement constraints.

3.0 MAIN CONTENT

3.1 Non Compliance and Enforcement of Environmental Law

Generally, our people like to abuse the law, by not respecting other people's right when it come to issues in general and the environment is not an exception in this area on the attitude of the populace on non compliance and enforcement of the law. It is important to note that Ignorance of law is not a benchmark for flouting or non-compliance to Environmental law.

The general cliché that ignorance of the law is not an excuse for non-compliance of the environmental regulation in the world over and the presence of blatant contravention of environmental laws in Nigeria and other third world countries cannot be over emphasized. The problems associated with non-compliance and enforcement of environmental laws is as follows:

a. Lack of environmental consciousness
b. Lack of qualified workforce
c. Corruption among the top hierarchy
d. Misappropriation of Ecological fund
e. Lack of Government interest /inadequacy
f. Lack of database
g. Poor funding of activities and operations
h. Economic considerations
i. Lack of maintenance culture and facilities
j. Use of internal environmental audits
k. Dearth of environmental pressure groups
l. Weak enforcement of existing laws and regulations
m. Lack of environmental know how and technology
n. Lack of or inadequate state of the art in-situ instruments for rapid detection of banned goods and products.

It is pertinent to note that all these are in no small measures affect implementation of environmental policies, programmes and regulations especially African countries which tend to slow the pace of awareness campaign to protect and sustain our environment.

3.2 Enforcement Constraints of Environmental Laws

It is generally the role of the government to make laws and set achievable standards in this regard to avoid unwholesome destruction of the earth and its resources, a bench mark which must be set and which will not exceed any enterprises or human activities likely to impact the environment negatively and must however comply with Standards and this can either target specific environmental medium such as water, air, land, or have the objective of protecting the human environment. As a result, environmental standards and regulations became important and integrated to avoid loopholes that can result in disastrous human consequences.

Nigeria has more than one hundred and twenty two Acts and additional subsidiary legislations dealing with environmental issues, for example, legislations on natural resources, petroleum, resources, mining/quarrying, maritime activities and industries (LEEP 2002). Many of these legislations which were made in the 1940s, 1950s, and 1960s were not

properly enforced during its hay-days, in addition to its inadequacy and now are outdated and obsolete. The penalties for non-compliance are minute allowance and a slap on the wrist for violators.

Environmental management in Nigeria is pivoted on the 1989 National Policy on the Environment as revised in 1999, 2007 and 2009 as well as a set of laws, regulations, guidelines and standards to ensure the conservation of natural resources and the protection of the environment and human health. Importantly, there is no requirement or fixed basis for the size of the fine which could be based on the volume, toxicity, and damage or polluting history of the corporation.

However, it is pertinent to note that with the exception of Lagos State, pollution charge fund, all revenues from fines go to the Federal government revenues and not FEPA or a State Environmental Protection Agency (SEPA). The FEPA in 2007 metamorphosed into National Environmental Standards and Regulations
Enforcement Agencies (NESREA), who however, takes the role of FEPA in its entirety.

4.0 CONCLUSION

In conclusion it is important to state clearly that the enforcement procedure of laws relating to the environment cannot be ignored with impunity so also the constraints of the enforcement procedures of these laws.

5.0 SUMMARY

In summary, this unit has extensively discussed the enforcement procedures and the constraints attached to this.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Identify some constraints hindering the enforcement of environmental laws and properly address the issues identified.
2. How does ignorance affect the enforcement of environmental laws?

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UNIT 4 HAZARDOUS AND TOXIC WASTES IN AFRICA

CONTENTS

1.0 INTRODUCTION

Hazardous wastes as the name connotes is a dangerous wastes that causes damage to human and aquatic life and generally the environmental world. The dilemma of hazardous wastes, dumping of toxic wastes to Africa became famous in 1988 as a result of Koko Toxic Dump, conservation legislation, now there are lots of hindrances affecting this legislation, its inadequacies and constraints in its enforcement and the proposed reforms.

2.0 OBJECTIVES

This unit will be discussing the concept of toxic and hazardous wastes in Africa, the danger associated with it, the sources of such wastes and the importation of the wastes to Africa by most foreign countries particularly to Nigeria. It is expected that at the end, learners would understand and be able to discuss this concept.

3.0 MAIN CONTENT

3.1 Hazardous Waste

The business of toxic waste is gigantic, satanic and dangerous and it belongs to the pedigree of what observers called Devil's Trinity, which includes hard drugs (cocaine for example) and arms. It is important to reiterate that the use of toxic and hazardous are used interchangeably but naturally they mean the same thing and stands for the same concept. When it comes to matters of environmental pollution they are extension of one and another.

The word “toxic” simply means “poisonous” just as a toxin is a poison. By extension, a poison is an agent that chemically destroys life or health

upon contact with or absorption by an organism. By implication, poisons are harmful to life and health and anything that is harmful is said to be hazardous.

Toxic is defined in the Basel Convention as having poisonous effects if breathed in, eaten or absorbed by the skin, including carcinogenicity i.e. cancer – producing.

In Nigeria under section 15 of the Harmful Wastes (Special Criminal Provisions etc.) Act, Cap. H1, Laws of the Federation of Nigeria (LFN) 2004, harmful wastes mean: Any injurious poisonous, toxic or noxious substance and, in particular, nuclear wastes emitting any radioactive substance … as to subject a person to the risk of death, fatal injury or incurable impairment of physical or mental health.

"Waste" on the other hand means something which originally served a purpose, but is no longer useful, as for example, refuse. They are things left over or are superfluous as excess materials or by-products not required for use in the work at hand. In the context of the topic under discussion, wastes are derived frommechanical and chemical disintegration. In the industrial context, when chemicals are produced, the residue forms wastes and these are more often than not toxic.

In the view of an environmentalist, Professor Dharmendra S. Sengar (an Indian) states that "industrial civilization has led to an explosive growth of industries including the hazardous ones. These companies and industries have not only exploited the natural resources to their maximum but the discharge of toxic effluents and emissions from hazardous industries have also polluted the surrounding environment. Thus, industrialization has resulted in a high degradation of the environment and caused enormous human health hazards".

Naturally it is important to note that toxic wastes are hazardous because of their physical or chemical quality; it is even more so when they are in large quantities. Such wastes cause grave illnesses and contribute significantly to the destruction of life forms of all kinds.

3.2 Sources of Toxic Wastes

The sources of toxic waste can be categorically be found in two ways and they are human and natural sources, the damage caused by each of them cannot be quantified.

(a) Human Sources:

Naturally toxic wastes arise from businesses, refineries and industries. The volume of waste generated by industries is frightening because of its overall effects on the environment, and considering the fact that most of these toxic wastes are crude before disposal especially in a developing country like Nigeria where there is virtually little or no treatment and disposal regulations. The toxic waste generated by industries may be liquid, solid or gaseous depending on the products of such industries and the raw materials used in their manufacture. Some of the industries, which generate toxic wastes, include the following:

- Chemical manufacturing plants that produce wastes types such as strong acids and bases, spent solvents and reactive wastes;
- Cleaning agents/cosmetic-manufacturing industry, which generates heavy metal dust, ignitable waste, flammable solvents, strong acids and bases.
- Printing industry which generates heavy metal solutions, wastes ink, solvents, spent electroplating wastes, ink sludge containing heavy metals;
- Furniture and wood manufacturing and refinishing plants produce ignitable wastes and spent solvents;
- Metal manufacturing industries produce place wastes containing heavy metals, strong acids and bases, cyanide wastes and sludge containing heavy metals;
- Leather products manufacturing plants produce benzene (a clear colourless, aromatic liquid extracted from coal tar and used as a solvent and intermediate in manufacturing organic chemicals) and wastes toluene (a colourless, flammable, mobile liquid hydrocarbon obtained from coal tar and petroleum, used in making explosives, dyes and as a solvent);
- Paper industry which produces print wastes containing heavy metals, ignitable solvents, strong acid and bases; and
- Vehicle manufacturing and maintenance shops which produce heavy metal wastes, ignitable wastes, used lead acid batteries and spent solvents.

It is imperative that the greatest culprit of toxic waste generation is the nuclear industry where the wastes generated are just as dangerous to handle as the nuclear products themselves. There are also some organic substances such as solvents and vapours, which are made up of such things as kerosene, petrol, tetrachloromethane etc. Pesticides, such as DDT are also toxic in nature and extremely dangerous when used improperly

Nigeria as vulnerable as it is has no nuclear industry for now but her oil and gas industry is responsible for the generation of a very large volume of toxic wastes generation.

b. Natural Resources

The main apparent natural sources of toxic wastes include volcanoes which upon eruption, produce a lot of toxic gases and undesirable and damaging larvae, and, of course, food containing phytoxins which are highly poisonous when improperly processed or eaten raw.

3.3 Export of Toxic Wastes to Africa

The harmful effect of toxic wastes cannot be overemphasized. Toxic wastes are hazardous because when the chemical contents of the wastes react with the atmosphere, the wastes endanger health and impair the ecological system. Thus, for example, an industrial waste that is toxic could escape from its captivity and seep into the ground and from there to the streams and rivers causing death to marine life and persons.

Across the globe, the nuclear industry today has done more than its fair share of damage to life forms and the environment. Export of toxic waste to Africa in particular became known in 1988. At Koko, a town in the old Bendel State (now Delta State) a devil-incarnate businessman called Gianfranco Rafaelli, was who dumped the toxic waste after approaching a 67-year-old Sunday Nana to acquire a "piece of land to dump what he claimed was raw materials for his industry". It was later discovered that Rafaelli was having, at Koko, 8,000 drums of Polychlorinated biphenyl sulphate (PCBS), methyl melamine, dimethyl ethyl-acetate formaldehyde etc., which were the world's most hazardous waste.

It is dawn on us that Africa has been turned into the World’s dumping ground for the deadly hazardous wastes. This attracted a lot criticism and condemnation from all nooks and crannies.

We cannot forget in a hurry that a ship called Kian Sea carried 2,000,000 tonnes of Philadelphia Ash from Panama to Guinea-Bissau in West Africa. Benin Republic was reported to “have a contract on January 12, 1988, with a British company affiliated to South Africa to dump about five million tonnes of waste yearly. Benin Republic was expected to receive a ridiculous fee of $2.50 per ton from Sesio Gibraltar, the company behind the deal, despite the fact that in the developed world, more than $5,000 would have been charged per ton of waste". This writer is not in any way subscribing to such negotiation, of any amount.

In the words of Dr. Layeni Adeyemo an expert on occupational and environmental health and a Director at the Lagos State Ministry of Health, she stated that Nigeria is now among the leading dumping grounds in the world for high-tech waste from developed countries. In a paper she delivered at the Post e-Waste Stakeholders' summit, organised by the Lagos State Environmental Protection Agency (LASEPA) in July 2011 at its premises in Alausa Ikeja, Lagos State, Adeyemo said an estimated 50 million tonnes of e-waste were produced globally every yearly. She categorised e-waste into three, namely: house appliance such as refrigerators and washing machines; telecoms appliances such as computer and Mobile Phones and consumer equipment like disused television sets. She stated that over 80 per cent of the world's high-tech waste ends up in landfills in Asia and Africa, Nigeria is emerging as one of the top dumping grounds for toxic, chemical and electronic waste from the developed world.

After toxic waste was dumped in Koko, the United Nations Environment Programme, UNEP, set up a centre to be handling waste, especially hazardous waste, at the University of Ibadan, Nigeria, which is headed by Professor Oladele Osibanjo and Dr. Evans Aina's Federal Environmental Protection Agency, FEPA. The former "was part of the team involved in the decontamination process of Koko town.

However, it is remarkable to note that this incident provided the momentum needed to promulgate the Federal Environmental Protection Agency Decree which was promulgated in the same year (1988). The first legislative reaction to the Koko Toxic waste incident was the Harmful Wastes (Special Criminal Provisions) Act 1988 now Cap 165 Law of the Federation of Nigeria 1990 as revised in 2004. This is majorly to prohibits the dumping of harmful waste in any form into any territorial waters or Exclusive Economic Zone of Nigeria or its inland waterways. The first State in Nigeria to follow suit with similar provisions appeared in the Lagos State Environmental Pollution Control Edict, 1989.

The FEPA Act has since its enactment has been amended twice 1999 and 2007 when the nomenclature was entirely changed and the scope of its function widened. It is known as the National Environmental Standards and Regulations Enforcement Agency (NESREA) and was established in November 2006. The NESREA Act was signed into Law by President Umar Musa Yar'Adua GCFR and this has been published in the Federal Republic of Nigeria Official Gazette No 92 Vol. 94 of 31st July, 2007 By the NESREA Act, the FEPA Act Cap F No10 LFN 2004 has been replaced.

4.0 CONCLUSION

In conclusion it is important to note that the dumping of toxic wastes in Africa has been devastating to the populace, and this is been done through the efforts of some impoverish fellows, the likes of Nana in Koko town of Delta States. It is a share grace how Africa sustained herself the last several decades in the light of multifarious environmental hazards which she faced.

5.0 SUMMARY

In summary, in this unit we have been able to discuss, the concept of toxic wastes and we have emphasized how dangerous they are to human health in particular and the environment in general. Learners of this unit should be able to give a critical insight into the concept, talk about its sources and also the effect of the export of the substances into Africa and Nigeria in particular.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. With thorough analysis define the concept of toxic and hazardous wastes and give the sources of the concept.
2. Explains the concept of exportation of toxic wastes to Africa and Nigeria as a signatory to the Brussels Convention.

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MODULE 4

UNIT 1 CONSERVATION

CONTENTS

1.0 INTRODUCTION

The idea behind conservation cannot be overemphasized, as it is peculiar to the founding of the earth itself, the application of the principle in its present parlance is relatively new. In the previous year's conservation required many connotation, to some it simply means, the protection of wildlife, to others, it means the sustained production of useful materials from the resources of the earth. Full details of these definitions shall be considered as we progress in this unit.

2.0 OBJECTIVES

This unit will discuss the general concept of conservation, form the definition of the term, to its concept, we will also discuss the history of the concept, then its importance to the environment and the populace at large. It is important to also note that laws and policies guiding conservation will also be discussed. And learners at the end should be able to discuss extensively, conservation as it relates to the environment.

3.0 MAIN CONTENT

3.1 Definition of Conservation

The word conservation means different things to different people; the word conservation (ethics) means is an ethic of resource use, allocation, and protection. Its primary focus is upon maintaining the health of the natural world: its, fisheries, habitats, and biological diversity. Secondary focus is on materials conservation and energy conservation, which are seen as important to protect the natural world. On the other hand, conservation biology is the scientific study of the nature and status of Earth's biodiversity with the aim of protecting species, their habitats, and ecosystems from excessive rates of extinction. It is an interdisciplinary subject drawing on sciences, economics, and the practice of natural resource management.

Hornby A. S. (1984) defined the concept as the protection of Natural environment and the official protection of buildings that have historical or aesthetic importance and the act of preventing something from being lost, wasted, damaged or destroyed.

Conservation involves practices that perpetuate the resources of the Earth on which human beings depend and that maintain the diversity of living organisms that share the planet. These activities include the protection and restoration of endangered species, the careful use or rejecting of scarce mineral resources, the national use of energy resources, and the sustainable use of soils and living resources. (Fubara 1998).
The most generally acceptable definition presented in 1980 in world conservation strategy by the International Union for Conservation of nature and Natural Resources, is that of “the management of human use of the biosphere so that it may yield the greatest sustainable benefit while maintaining its potential to meet the needs and aspirations of future generations.”

It is important to note that naturally, the idea behind conservation is to conserve habitat in terrestrial eco-regions and stop deforestation , to protect sea life from extinction due to overfishing is another commonly stated goal of conservation ensuring that "some will be available for our children" to continue a way of life.

We will reiterate that this idea brought up the establishment of most nongovernmental organisation in the direction of conservation of our environment and a lot for us to leave legacies to generation yet unborn. The most important now is the issues include the depletion of

atmospheric ozone by the action of chlorofluorocarbon (CFC) the green house effect and the destruction of the tropical rainforests.

3.2 History of Conservation

It is important to note the history of conservation dates back to the earlier times with the preservation of medicines it is crystal clear, that, in the pre-historical era, it was on record that people did modify their natural environment. Early hunting and gathering cultures contributed to extinction of some animals species, although this seems to have been more of an exception than a general practice. For the most part, early man lived in an equable balance with the natural environment, if for no other reason than necessary. If they have done much damage, people could not have survived.

In addition, for more than 10,000 years, agriculture has been practiced and urban civilization has been in existence since 6,000 years.

However, in the period of Middle Age, some animals species were protected or conserved by religion taboos, fear of religion sanctions prevented the extinction of forest grooves and sacred mountains. The method of applying organic fertilizer to maintain soil fertility is found among many primitive people and has had a long history in Western agriculture. This age equally show evidence of the creation of game reserves and parks to protect wild life and natural resources alike. In addition, they were hunting specifically preserves for the use of royalty, this in turn served a conservation function.

It is worth mentioning, the agricultural landscapes of Western Europe, China and Japan which was a reflection of a great skill in the pre-industrial era in the conservation of soil resources. One cannot forget easily the irrigated Nile Valley and Volcanic soils in the tropical South East Asian which has kept functioning
and productive over a thousand years.

However, in the 19th and 20th century the civilization brought by the Europeans colonizers led to soil erosion and destruction of natural vegetation and wildlife in the colonized countries such as America, Australia, India and Africa.

The 19th century culminated into severe environmental depredations in many countries. For example, in Australia livestock were allowed to increase in population to levels far beyond what the natural forage could support. As a result, many animals during droughts, the system of over foraging destroyed the land to such a degree that they have not yet recovered. In the Southern part of Africa, many types of wildlife were

hunted to extinction while majority of the larger mammals reduced to small size that could hardly sustain their survival.

Conservation in the Millennium (21st Century) Okorodudu – Fubara posited that 'it could have been predicted that the modern conservation movement would have its beginnings not in the settled hands of the old-world but in those areas of the New World, where, within the memory of a single generation, there had been extreme changes in the landscape and in the abundance of wildlife. The response to the destruction of natural resources in those areas necessitated the establishment and development of conservation movement.

The national parks which is meant for preservation of wild nature and to the provision of outdoor recreation space, have developed unprecedentedly and side by side national – forest systems, preserved for the multiple use of wild-land resources have become firmly established. The conservation of wild life becomes a cause of national interest which led to establishment of different nature resources and wild land resources which in some cases exceeding their primitive numbers.

Conservation oriented management of forest lands, which developed more from its origin in Europe than from practices in the United State and become more widely acceptable all over the world. The management of wild animals in extensive wilderness areas of Africa, India and Soviet Union made major studies which possesses usual wildlife resources and retain a large areas of wild land. From the above analysis, the concept of conservation and its management cannot be studied in isolation of its historical growth.

Finally, most countries of the world by 1992 had become committed to the principles of conservation.

3.3 Concept of Conservation

1. Natural Resources

It is important that the need for natural resources under conservation cannot be ignored with a wave of hand. Natural resources especially the ones found in commercial quantity and quality were regarded as sources of most useful commodities worldwide. These raw materials are found in the environments that were used or capable of being used by people for various purposes: minerals and fuels, forest and gracing resources, wildlife, fisheries/acquirable animals and the likes. The concept could mean all of these or more.

It is important that the concept of natural resources due to changes and researches has been widened to mean that entire natural environment.

Note finally that the atmosphere, oceans, deserts and Polar Regions have all become valuable resources that must be properly managed with care and sincerity of purpose to provide for the future.

2. The need for Human (Primary/secondary) need

Generally, the main human race's primary desires and natural resources necessities for life include energy in the form of organic foods that are digestible, are capable of being assimilated and contain adequate amounts of proteins, fats, vitamins, carbohydrate and minerals. Water with low content of dissolved salts and free from toxic or injurious substances, air that contain an adequate quantity of oxygen by no harmful materials, and an external sources of energy for heating and cooling, as well as various materials from which clothing and shelter can be fashioned to provide warmth in cold weather and coolness during excessively hot weather.

Naturally, the need of people all over the world, are almost the same as the world is turning to a global village and these needs are secondary in nature. It is however important to reiterate these needs further. These no doubt include those materials or energy sources needed to maintain an urban civilization.

3. Agricultural and Urban development

The needs of man was sufficient in the early times and where proportionate with what was available the desire for more was virtually absent, but as the population soon increased tremendously then the people soon outnumbered the capacity of the original existing natural environment to supply them primary needs.
As a result, the first set of secondary needs developed – farming tools and later, domestic animals to help use the tools more effectively and, for the latter, the food supplies necessary to sustain and keep them alive.

However, the need for more non-living natural materials/resources along with the rapid development of agricultural lands and settled villages was inevitable at this instance. Nevertheless, human wants tend to multiply as the greater leisure of civilize life enables part of the problem of just to survive but equally to sustaining the environment for the generation unborn.

4. **Industrial and Technological growth**

As the world is tuning into a global village, the demand for industrial and technological growth is one of the most widely needed of all, and this has actually snowballed. In the present dispensation there are more concentration on the resource that are scarcely consumed in the previous centuries and are largely consumed such as berylliums for rockets, uranium for nuclear fuel, natural gas, coal, and petroleum.

The need for other resources is the result of the desire to live in greater numbers and at a standard of living considerably higher than that previously enjoyed. It is imperative to note that, with the growing human population, with an expanding technology that becomes ever more demanding, and with the growing demands for material goods, the pressure on the earth's natural resources increases steadily. Whether or not available quantities of these resources are sufficient to meet humanity's growing wants and needs is uncertain" (Wabara, 1998).

3.4 Importance of Conservation

The importance of conservation to the mankind or to human survival cannot be overemphasized. Generally, it is imperative to note that the human life depends upon the proper functioning of the biosphere – the relatively narrow zone of air, water, soil and rock in which all life on earth depends. The ultimate purpose of conservation is to protect the biosphere in a healthy operating condition. However, plants and animals generates nutrients are not left out of this cycle that requires to be conserved and which helps to maintain the fertilities of soil, many of the elements that contributes to the proper functioning of the biosphere have not yet been identified. Then the attitude to preserve and care for the environment is unavoidable.

1. Prevention Pollution

Conservation prevents pollution of nature: There are many examples of the serious effect of pollutants in air, water or soil on human health and survival which conservation would have prevented. For instance the dumping of toxic wastes in Koko, Delta State and Ilogbon – Iyana Offa, Ibadan, Oyo State, Nigeria which claimed many lives. And the dumping of Mercury containing wastes into the rivers in Japan caused death of many people.

2. Economic Importance

The economic importance of conservation may be rarely appreciated. However, the floating plants of the ocean, the microscopic

phytoplankton, are of little direct economic importance to human beings, for instance, their elimination from the food chain would quickly destroy the world's marine fisheries that constitute a major source of human diet and the world's source of Oxygen supply.

3. Aesthetic and Recreational Value

It is pertinent to note that the wild nature is one of the sources of aesthetic pleasure and the use of wild lands and wild-animals resources for recreational enjoyment cannot be ignored with impunity. These values have long been recognized as among the more important values of conservation.

The much exciting traditional and even modern sports that is associated with nature like fishing, hunting, beating, swimming, boat racing, sunbathing, skiing and picnicking which are grouped amid the outdoor based recreational activities are in tune with the continued existence of natural or near-natural environment as the sites for these activities.

The recreation value or importance of aesthetic of nature in terms of the psychological or sociological importance became very imperative because they vary from one culture to another, evidence indicates that, as personal affluence and the freedom from the sheer struggle for survival increases, the demand for
outdoor recreation and outdoor space also increased.

4. Scientific Value

This is one of the vital areas of importance of conservation, it has a great scientific value. This is as a result of the fact that relatively little is known about the past, present and possible future of the biosphere, natural outdoor laboratories including areas of undisturbed nature, must be maintained in order to conduct the studies needed to acquire knowledge.

However, this has brought the conservation biology to attention, then the need for so many fields of plants and animals with undiscovered scientific values. This is because each wild plants and animals contains a storehouse of genetic and biochemical information, the loss of single specie might cause the loss of information that could ultimately have great value for mankind's welfare and survival.

3.5 Laws and Policies Guiding Conservation

It is imperative to note that no nation can survive in isolation, laws and policies are essential part of survival of any nation. The present states of

the world have shifted to the states of sustainable development. The world conferences on environmental development have severally drummed the sustainability of national programmes plans that surpass the current generation and forward looking to the next generations unborn. Law and policy have made great impact towards holistic objective of nature sustainability through concept of conservation.

There have been a lot of laws and policies from the federal level to the state level, this is however important in all areas of the human endeavour like water, land and finally air resources just to mention a few.

It is important that the misuse of land can have harmful impact on the environment and co-existence of man. Before the promulgation of Land Use Decree, 1978 by the Obasanjo Military Regime, ownership of freehold or customary land imposed no corresponding obligations on the quality of development.

One stunning aspect of the Land Use Decree is the conservation and protectionist policy. For instance, control over the manner in which land is used would if efficiently implemented reduce incidents of slum housing, under utilization or unproductive use of agricultural lands and wanton assault on or destruction of
the natural resources of the land.

There are other specific laws and national policies which complement the objective of Land Use Decree. And that the performance of the agricultural sector is critical to conservation of land resources. The main objective of land resources policy is outlined under the National Agricultural Policy, 1988, is to rehabilitate areas of the country that are affected by draught, desert encroachment, soil erosion and flood; to prevent the spread of these natural disasters to other areas through effective protection measures".

Several attempts have been made to control the problems of deforestation and desertification which is one of the main problems of our environment through the enactment of appropriate legislation. These problems are caused mainly by the haphazard spread of agriculture, commercial timber felling, and wood cutting for fuel to serve the energy needs of the people both in urban and rural areas, game related, bush burning, accidental, and deliberate bush burning. For example, the Ondo State Government enacted the control of Bush Burning Edict 1989, Edict No. 4 purposely to protect the State and its people from the adverse effects of indiscriminate decisive response to one of the major causes of forest depletion in Nigeria.

Other international treaties that Nigeria ratified asides the laws it enacted are the Convention on International Trade in Endangered Wild Species of Fauna and Flora which aimed at ensuring through international cooperation, the protection of certain species of wild animals and plants against over exploitation through trade. However, in 1977, Nigeria and Cameroun with Niger Republic ratified an agreement in the Joint Regulation of Fauna and Flora on the lake Chad Basin.

The promulgation of the Endangered Species (Control of International Trade and Traffic) Decree 1985 not only gives municipal effect to the related international treaties provisions but equally significant. It expressly prohibits the hunting, capture of, or trading in any of the ninety one animal species as specified in
scheduled 1 and 2 of the Decree.

There are also legislations in other to protect the water of the nation and these are:

- The River Basin Development Authorities Decree, 1987 which repealed an earlier statute, the River Basin Development Authorities Decree 1976. The Law establishes eleven River Basin Development Authorities in the country. The statute specified the following requirements in each of the authorities' specific region of operation. And each states as well as the Federal government promulgated a lot of laws to avert the surge of water pollution.
- The oil in Navigable Waters Decree, 1968, prohibits the discharge of oil into designated sea areas and made provision for penalties for the specified offences. It gives municipal effect to the international convention for the prevention of pollution of the sea by oil, 1954, which Nigeria acceded to on April 22, 1968. The minister of Petroleum is mandated to full charge by the degree.
- The Petroleum (Drilling and Production) Regulations 1969 which provides that a licensee or lessee shall take practicable precautions to avoid pollutions of inland water systems as well as territorial water of Nigeria or the high seas by oil, mud or other fluid or substances capable of causing harm or destruction to fresh water or marine life. If such pollution through spillage occurs, the licensee or lessee must take prompt steps to control and if possible prevent it. This is in line with s26 of Petroleum Decree 1969.
- The Harmful Waste (Special Criminal Provisions etc) Decree, 1988, which was enacted by the Federal government in swift reaction to the illegal dumping of hazardous wastes from abroad in certain parts of the country, prohibits the dumping of harmful

waste in any form into any territorial water or Exclusive Economic Zone of Nigeria or its inland waterway.

- Lagos State government made a provision similar to the above when it enacted Lagos State Environmental Pollution Control Edict, 1989, that "No person or group of persons shall dump or burry or cause or allow to be buried or dumped in any water within the state any toxic or hazardous substance or harmful wastes". This was repealed by Lagos State Environmental Protection Agency Edict No. 9, 1997.

These are laws and policies in relation to the protection and conservation of the air we breathe, for a clean air situation to be attained. The National Policy on the Environment 1989 and 2007 has enumerated the following strategies.

a. Designating and Mapping of National Air Control Zones (ACZ)
b. Declaring air quality objectives for each designated Air Control Zones
c. Establishing ambient air quality standards and monitoring stations at each designated zones.
d. Provision of standards for factories and other activities which emit pollutants into the air
e. Licensing and registering of all major industrial air polluters and monitoring their compliance with laid down standards.
f. Provision of guidelines for abatement of air pollution.
g. Prescribing stringent standards for the level of emission from automobile exhausts and energy generating plants and stations.

4.0 CONCLUSION

Conservation is an inevitable aspect of our daily life and it is pertinent to protect our environment to the fullest and make judicious use of it for generation yet to come. It is imperative that conservation through the efforts of various nongovernmental organisations has done a lot in preserving our environments.

5.0 SUMMARY

In summary, this unit has been able to discuss conservation in all its area as it relates to the human existence. It is of paramount concern that learners should be able to discuss conservation from its definition, to the historical development of the concept, its importance to the human race and finally the laws and policies guiding its sustenance.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Define the concept of conservation and relate its importance to the human race.
2. Discuss the efforts of both international organization and Nigeria government towards sustaining our natural resources.

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UNIT 2 WASTE AND WASTE MANAGEMENT

CONTENTS

1.0 INTRODUCTION

Waste generation is a part and parcel of our daily life, as it is reiterated that only the dead do not generate waste, it is considered that every human being is expected to generate waste. The management of this waste is imperative in order to avoid some level of environmental pollution. It is also pertinent that waste is a natural consequence of life in both human and ecosystems and industries. As human consumption increases, so does waste. The thinking of government and many others in this direction of waste has changed radically.

2.0 OBJECTIVES

The main objective of this unit is to generally discuss the conception of waste and waste management. It is important that the sources of laws regulating this concept will also be discussed. However, it is imperative that the efforts of some state government in the management of waste cannot be ignored with a wave of hand especially Lagos State. At the end of this unit learners should be able to discuss waste, waste management and sources of waste management.

3.0 MAIN CONTENT

3.1 Waste

Waste has been defined by various environmental experts, it is defined in the Oxford Advanced Learners Dictionary' 4th Edition as something that is not or no longer useful and is to be thrown away, or disposed of. It was also defined by M. Purdue, as any act or omission which results

in a change in the land for better or for worse example conversion of arable land into a timber plantation.

Then, the World Health Organisation (W.H.O) defines the concept as something which the owner no longer wants at a given place and time and which has no current or perceived market value.
The United Kingdom Environmental Protection Act of 1990 defines waste as:

a. Any substance which constitute a scrap material, an effluent or other unwanted surplus substance arising from the application of any process.
b. Or any substance or article, which needs to be disposed of, as being broken, worn out, contaminated or otherwise spoiled.

However, the Lagos Sate Environmental Sanitation Edict of 1985 No12 attempts a definition similar to that of the United Kingdom.

3.2 Sources of Wastes

Wastes can be classified into various sources like the control wastes, and dangerous wastes. Control wastes are household wastes e.g food, office wastes, commercial wastes and wastes from stores. These are set of wastes that can be easily managed, treated, recycled and disposed of as the need be.

However, dangerous wastes are wastes that are too treacherous to treat, keep or dispose of. These are wastes that include acid, alkalis lead, mercury, and methyl etc. they are wastes that are dangerous to human life if swallowed, inhaled, or in contact with the human nature.

3.3 Waste Management

Waste management is the collection, transport, processing or disposal, managing and monitoring of waste materials. The term usually relates to materials produced by human activity, and is generally undertaken to reduce their effect on health, the environment or aesthetics. Waste management is a distinct practice from resource recovery which focuses on delaying the rate of consumption of natural resources.

Waste management practices differ for developed and developing nations, for urban and rural areas, and for residential and industrial producers. Management for non-hazardous waste residential and institutional waste in metropolitan areas is usually the responsibility of local government authorities or the state. There several methods of

waste disposal that makes the management easier and effective are landfill, incinerator, energy recovery and resource recovery.

1. Landfill

Disposing of waste in a landfill involves burying the waste, and this remains a common practice in most countries. Landfills were often established in abandoned or unused quarries, mining voids or borrow pits. A properly designed and well-managed landfill can be a hygienic and relatively inexpensive method of disposing of waste materials. Many landfills also have landfill gas extraction systems installed to extract the landfill gas. A typical example of a landfill is the one located in Ojota in Lagos State.

2. Incineration

This is also another method of waste disposal that aids the effective management of the concept. Incineration is a disposal method in which solid organic wastes are subjected to combustion so as to convert them into residue and gaseous products. This method is useful for disposal of residue of both solid waste management and solid residue from waste water management. This process reduces the volumes of solid waste to 20 to 30 percent of the original volume.

Incineration is common in countries such as Japan where land is scarcer, as these facilities generally do not require as much area as landfills. Waste-to-energy(WtE) or energy-from-waste (EfW) is part of the features of incineration. A typical incineration in Lagos State is the center in Simpson and the waste to energy center in Ikorodu.

There a lot of other waste management methods but are rarely in use in Nigeria and they include Energy recovery, Resource Recovery and Avoidance and reduction methods of waste management. And also recycling is also a part of the methods of waste management that is also used in Nigeria.

Waste collection methods vary widely among different countries and regions. Domestic waste collection services are often provided by local government authorities, or by private companies in the industry. However, in Lagos State, the state government is responsible for waste collection through the private participation of companies, and the effective door to door collection have seriously reduced the menace of refuse disposal in the state.

The issue waste management cannot be discussed without a mention of the marine waste management, the NIMASA DG Mr. Zikiade Patrick

Akpobolokemi, noted that investment in waste management in the Nigerian marine environment would not only improve the country's rating in the global maritime industry, but also have a multiplier effect of employment generation in Nigeria amongst others. "It is to the benefit of Nigerians that this public private partnership model of managing waste in our marine environment is sustained and encouraged to grow rapidly.

Stages in Waste Management

The various stages involved in Waste management are:

1. Generation: This is the stage when materials becomes waste and is discarded. The generation rate is often defined as the weight of material discarded as solid waste by one person in one day;
2. Storage: House storage, keeping solid waste in place or containers which is the responsibility of the individual members of the household while, Command storage, is the responsibility of the refuse collection agency.
3. Collection: This has to do with transportation of the solid waste from the point of storage to the point of disposal, two stages are involved in the collection stages;

    a) **The direct collection,** which makes uses only one means of transportation i.e. the Solid waste is picked up from the point of storage in a truck that takes it to the disposal site,
    b) **The second stage collection** Carries the solid waste from the storage facility to the Transfer station, at the transfer station, the waste is loaded into the secondary stage, to transport the refuse to the Disposal site.
    4. Disposal: The final destination of solid waste, usually it is dumped on land at a tip, this may be done in an engineered and hygienic Way: - sanitary landfill or controlled tipping, or in a careless Way: - open tipping or crude dumping.

3.4 Sources of Laws governing Waste Management in Nigeria.

There are lots of laws governing waste management in Nigeria, these waste could come in different ways including the marine wastes just to mention a few of them. And these laws dates back to the colonial era:

- Public Health Act, 1917
- Water Works Act 1915
- FEPA Act 1988, now NESRA Act 2007
- Petroleum Act 1969
- Oil in Navigable Waters Act of 1968
- Lagos State Environmental Pollution Control Edict of 1991

Other international are:

- Basel Convention on the control of Trans-boundary Movement of Hazardous Wastes and their Disposal 1989.
- Vienna Convention on the Protection of the Ozone Layer 1987.
- Montreal Convention on Substances that deplete the Ozone Layer 1987.
- The Kyoto Convention on the Depletion of the Ozone Layer, 2003.

4.0 CONCLUSION

Waste generation, disposal and management are a daily part of our life that should not be treated with impunity. It is important to also reiterate the efforts of the Lagos State government in managing all kinds of wastes such as hazardous and medical wastes.

5.0 SUMMARY

In this unit, it is important to note that we have the discussed the concept of waste and its management. Learners should be able to offer different definitions to it, its sources and should also be able to explain the concept of waste management and the sources of laws governing waste management.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Explain the term “waste.“
2. Explain the methods of waste disposals that make its management effective.
3. Explain the relevant laws that are sources of law to waste management in Nigeria.

7.0 REFERENCES/FURTHER READING

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UNIT 3 ENVIRONMENTAL POLLUTION AND MANAGEMENT

CONTENTS

1.0 INTRODUCTION

It is important to note that pollution is an inevitable aspect of the environment. It is pertinent to note also that, industrialization has resulted in a high degradation of the environment and caused untold human health hazards especially in most urban and semi-urban centres.

The workers in most of these industries and the members of public are not protected against the health hazard because of exposure to hazardous chemicals which these industries release into environment.

The global environment is also being threatened by the problem of acid rain ozone layer depletion and climatic modification. The effect of this is devastating on the environment and the health of the populace in general.

2.0 OBJECTIVES

The objective of this unit is to discuss pollution, its definition, nature and history of the term pollution. We will also discuss the types and sources of pollution to the environment. It is important to state that pollution is an environmental degradation to the populace. The causes and its effect on the environment and the people, Laws, policies and regulations guiding it will also be discussed. At the end of the unit learners are expected to understand all these concepts.

3.0 CONTENT

3.1 Definition of Pollution

Pollution is the introduction of contaminants into a natural environment that causes instability, disorder, harm or discomfort to the ecosystem i.e. physical systems or living organisms. Pollution can take the form of chemical substances or energy, such as noise, heat or light. Pollutants, the elements of pollution, can be either foreign substances/energies or naturally occurring contaminants.

Pollution is the harmful effect on the environment of by-product of human activity, principally industrial and agricultural processes. For example, noise, smoke, car emissions, chemical affluent in seas and rivers particularly sewage and household waste (all contribute to greenhouse effect).

He went further that ‘natural disasters may also cause pollution; volcanic eruptions, for example cause ash to be ejected into the atmosphere and deposited on land surfaces. Pollution can also be the consequence of a natural disaster. For example, hurricanes often involve water contamination from sewage.

Pollution is assumed to be a relative concept because although almost no substance exists in pure state, it is only when the imparities rise above a certain level that it became dangerous and harmful. Therefore, pollution can be defined as the addition to air, water and / or of any material (or heat) that usually found there or that is in excess of normal amount.

Pollution has also been defined under the Environmental Protection Act 1990 S 1(1); this involves pollution due to the release into any environmental medium from any process of substances which are capable of causing harm to man or any other living organisms supported by the environment.

Hodge posited that pollution is the introduction by man into the environment of substance or energy liable to cause hazards to human health, harm to living resources and ecology system, damage to structure or amenities or interference with legitimate of the environment.

In a similar vein, the FEPA Act in S38 defines “Pollution” as “Man-made or man – aided alteration of chemical, physical or biological quality of the environment to the extent that is detrimental to that environment beyond acceptable limits. The UN conference on Environment in 1972 at Stockholm defines pollution as “The discharge of toxic substances and the release of heat, in such qualities or

concentration as to exceed the capacity of the environment to render them harmless".

2.2 History and Nature of Pollution

The history of pollution dates back to the 1272 in England King Edward I of England banned the burning of sea-coal by proclamation in London in 1272, after its smoke had become a problem. Air pollution is the most common type of pollution and would continue to be a problem in England, especially later during the industrial revolution, and extending into the recent past with the Great Smog of 1952.

It was the industrial revolution that gave birth to environmental pollution as we know it today. The emergence of great factories and consumption of immense quantities of coal and other fossil fuels gave rise to unprecedented air pollution and the large volume of industrial chemical discharges added to the growing load of untreated human waste.

Pollution became a popular issue after World War II, due to radioactive fallout from atomic warfare and testing. Then a non-nuclear event, The Great Smog of Pollution began to draw major public attention in the United States between the mid-1950s and early 1970s, when Congress passed the Noise Control Act, the Clean Air Act, the Clean Water Act and the National Environmental Policy Act.1952 in London, killed at least 4000 people.

The issue of environmental pollution became glaring worldwide and in the continent of Africa respectively shortly after the 1972 United Nations Conference on Human Environment at Stockholm where it was not only confirmed the emergence of environmental protection as a new focus of legislation so as to avoid crisis but equally emphasized the close inter relation between the environment and development. (Mowoe, 1990).

In Nigeria the issue of pollution came to the forebear after the Koko toxic waste saga that happened in 1988. It is important to reiterate further that oil spill is another sets of environmental pollution that has become a surge that need be fought.

It was this issue that triggered the response of the Federal Military Government to this incident that led to promulgation of the Federal Environmental Protection Agency Act, 1988 and the Harmful Waste (Special Criminal Provision)) Act of 1988.

Subsequently, in 1992, the UNO's Earth Summit in Rio de Jenerio in Brazil emphasized the close relationship between the environment and development. And the development must be sustainable by meeting the needs and aspirations of the current generation without compromising the ability to meet those of future generation.

3.3 Types and sources of Pollution

Pollution can take any form it depends on which area of the environment that has been polluted that will culminate into the type of pollution that it will be attributed to.

There are various forms of pollution in the environment all will be listed for the purpose of this study and they include:

- Air pollution: - the release of chemicals and particulates into the atmosphere. Common gaseous pollutants include carbon monoxide, sulphur dioxide:- chlorofluorocarbons (CFCs) and nitrogen oxides produced by industry and motor vehicles. Photochemical ozone and smog are created as nitrogen oxides and hydrocarbons react to sunlight.
- Light pollution: - includes light trespass, over-illumination and astronomical interference.
- Littering: - the criminal throwing of inappropriate man-made objects, un-removed onto public and private properties.
- Noise pollution: - which encompasses roadway noise, aircraft noise, industrial noise as well as high-intensity sonar.
- Soil contamination occurs when chemicals are released intentionally, by spill or underground leakage. Among the most significant soil contaminants are hydrocarbons, heavy metals, MTBE, herbicides, pesticides and chlorinated hydrocarbons.
- Radioactive contamination, resulting from 20th century activities in atomic physics, such as nuclear power generation and nuclear weapons research, manufacture and deployment. (See alpha emitters and actinides in the environment.)
- Thermal pollution-: is a temperature change in natural water bodies caused by human influence, such as use of water as coolant in a power plant.
- Visual pollution-: which can refer to the presence of overhead power lines, motorway billboards, scarred landforms (as from strip mining), open storage of trash or municipal solid waste.
- Water pollution-: by the discharge of wastewater from commercial and industrial waste (intentionally or through spills) into surface waters; discharges of untreated domestic sewage, and chemical contaminants, such as chlorine, from treated sewage; release of waste and contaminants into surface runoff flowing to

surface waters (including urban runoff and agricultural runoff, which may contain chemical fertilizers and pesticides); waste disposal and leaching into groundwater; eutrophication and littering.

However, for the purpose of this study only four will be discussed that is the land, water, noise and air pollution that affect our daily life in this part of the world.

1. Water Pollution

Water pollution is contamination of water bodies such as lakes, streams, rivers, oceans and groundwater caused by human activities, which can be harmful and injurious to organisms and plants that live in these water bodies through toxicity. It occurs when pollutants are discharged directly into water bodies without
treating it first. Water pollution is the process of altering the properties of any water which renders it unfit for consumption.

According to Akande, all fresh water contain dissolved materials such as phosphates, gases such as oxygen organic compounds, suspended particulate material such as silt and micro organisms. The quantities of each vary greatly from one area to another. But a lack of balance between them or a dramatic increase in any of them can lead to aquatic chaos in which whole ecology of the water body is upset. The water became unfit for human consumption and some or all focus of aquatic life are killed.

Water pollution can be classified into several ways which includes:

i. Pollution by putrescible refers to foul smelling, rotting of organic materials by bacteria materials such as waste from human, paper pulp plants, and canaries. Organic pollution is controlled by accelerating the process of decomposition of these organic wastes. When discharged into stream or river or lake, the organic materials decompose by using large quantities of oxygen from water. And this results into a large scale of water pollution.
ii. ii. Pollution by heated effluents: Oxygen is readily restored when the water is cool. The hotter it is, the lower the Oxygen holding capacity of the water. The bubbles that arise from heated water demonstrate what happens to the gases in hot water. The discharge of clean hot water into an unpolluted stream is hence as harmful as the discharge of organic wastes. In these cases the oxygen content of water is drastically reduced. It is as a result of all these that water pollution is a serious issue in tropical

countries. The temperature is always warm that it is difficult for the streams to absorb the necessary quantities of oxygen.

iii. Pollution by toxic materials: These are toxic wastes which are not easily settle out and are not easily broken down by biological means. Such toxic wastes such as DDT, Mercury, heavy metals, herbicides and pesticides are poisonous toxic when consumed or contacted by plants and animals depending on the degree and rate of consumption or dosage received.

iv. Pollution by inert materials, those which may affect biological conditions and equally De-oxygenate water. De-oxygenating materials includes sewage and organic wastes.

v. Pollution by radioactive elements and compounds.

2. Air Pollution

Air pollution comes from both natural and manmade sources. Though globally man made pollutants from combustion, construction, mining, agriculture and warfare are increasingly significant in the air pollution equation.

Motor vehicle emissions are one of the leading causes of air pollution, agricultural air pollution comes from contemporary practices which include clear felling and burning of natural vegetation as well as spraying of pesticides and herbicides.

Air pollution in the words of Atsegbua, et al (2003) “is the upsetting of the natural arrangement of different gases in the air. Air pollution is the accumulation of substances in the air, insufficient concentrations to produce measurable effects on man, plants and animals. It involves the erosion of harmful substances into the atmosphere, which cause danger to any living things”

It is also referred as the presence of foreign bodies in the air such as gaseous, particulate or a combination of all, which is highly hazardous to the health, sustenance and welfare of man (Awake, 1999).
The sources of air pollution could take effect from it various locations, activities or factors which are responsible for the realizing of pollutants in the air. There are two major categories of sources of air pollutants, that is anthropogenic sources and natural sources.

i. Anthropogenic sources are human made activities mostly related to burning different kinds of fuel. The sources cover:

a. Stationary sources (smoke attacks)
b. Mobile sources (vehicular exhaust)

ii a. Natural sources include dust, wind, methane emitted by digestion of food by animals e.g. cattle

b. Industries/Factories, motor vehicle exhaust electric cables, homes, incinerators, mechanic villages, bush burning, locomotive railway, aeroplane, etc. Out of all these, vehicular emissions account for about half of air pollution in the whole world whereas digging, tillers and burning of fires when clearing bushes or cooling account for the rest half. For instance, burning of oil and other local elements that produces sulphur IV oxide which is very dangerous and account for the recent air pollution that cause haven, discomfort to humans or other living organisms or damages the natural environment and threat to human health as well as to earth ecosystems.

Also the greenhouse gases and global warming effect causes the release of Carbon dioxide, while vital for photosynthesis, is sometimes referred to as pollution, because raised levels of the gas in the atmosphere are affecting the Earth's climate.

3. Land Pollution

Land pollution can arise in different ways, it could be through authorized and unauthorized means. Although in many cases, pollution of land is just one part of licensed activities.

In Nigeria as a nation the main sources of pollution is land through waste disposal in landfill system. The term land pollution equally includes anything laid in land which automatically impairs its arableness, yield or cultivability such as land mines, booby traps and other similar military devices.

Without fiddling, the major cause of Land Pollution in Nigeria and other parts of the world particularly in the millennium age can be traced to development of technology, that is, industrialization which led to the bursting of urbanization and the over concentration of the world population in the areas of the landmass. In addition, land pollution could also be in form of solid waste and has been defined as ‘non – liquid, non – soluble materials hanging from municipal garbage to industrial wastes that contain complex substances and sometimes hazardous substances’ (Hesketh, H. E 1970).

4. Noise Pollution

Noise can be described as unwanted or unbearable, /excessive sound. Be that as it may, “noise pollution” seems to have been taken for granted and in fact accepted by most people in the society. Noise is a sound,

especially when it is loud, unpleasant or disturbing. It can be countable or uncountable (Hornby, A.S. 1984).

In the words of C.S Ola, he reiterated that the average urban dwellers are open to health problems as a result of long continuous exposure to noise, sometimes at high intensities".

It has been observed by medical experts that frequent or chronic exposure to both high and low intensity sound may cause stress on all higher forms of marine life, potentially affecting growth, reproduction and liability to resist disease.

Generally, there various kind of noise pollution and they are:

i. Environmental noise and
ii. Occupational noise

The occupational noise hazard is more important to our discussion in this unit due to the fact that workers in most of industries are exposed to high levels of uncontrollable noise over a long period of time (Awake, 1999).

In these industries workers are exposed to idiotic situation of noise pollution because earmuffs to protect their eardrums are not provided, where they provides it, the workers due to gross carelessness refused to use the safety stuff that protects their ears from the excessive noise that may cause deafness.

It is important to note that there are various sources of noise pollution, which is peculiar to us in Nigeria.

- Amplified musical engine.
- domestic noise
- motor vehicle noise
- noise generated by the religious houses
- voices/sound from the neighbours
- Road traffic noise
- Noise from construction sites
- factories – mining, quarrying noise
- Noise emission from industries
- Mechanic and welder workshops' noise

3.4 Causes and Effect of Pollution

There are several causes of pollution to the environment ranging from the types of pollution that has been discussed in this unit. We will then analyse the causes and effect of these pollutions as discussed.

The causes of water pollution will be discussed and they include:

- õ Oxygen –depleting substances may be natural materials, such as plant matter like leaves and grass as well as man – made chemicals.
- õ Chemical substances are source of toxic for instance, pathogens produces waterborne diseases in either human or animal hosts.
- õ Surface water and groundwater pollution sources

The effects of the water pollution are numerous on the environment on human, animals and aquatics and they include:

- Water borne infectious diseases
- Arsenic Poisoning has adverse effects. It causes korotosis, a skin disease, and severe liver damage.
- Oil Spills equally result in health hazards to human beings and can also cause fire outbreaks, constituting extensive damage to life and property.

It is also important to note that the effects of noise pollution are numerous on human beings generally, it causes impairment, decrease efficiency, psychological disorder, disturbance of sleep and emotional disturbance.

The causes of this pollution especially in Nigeria are from numerous factories like The national and localized problems include cement Kiln dust SO2 from the fertilizer plants in Kaduna and Rivers States, cements factories in Sokoto, Ewekoro, Ogun State, and Kabba in Kogi States, multiple pollutants from the Nigerian National Petroleum Corporation (NNPC) refineries and gas flaring in the air coastal regions, industrial furnaces, boilers and thousands of private electrical generators also contribute in no small measure to air pollution particularly in Lagos which generate more than 60% of Nigeria's industrial activities are located.

The effect of air pollution cannot be overemphasized, mainly the effect is health in nature, according to a medical expert, the injury to human health depends upon the degree of toxicity concentration, duration of exposure and individual susceptibility.

The degree of industrial emission is second to vehicular carbon monoxides emission which is the major sources of urban air pollution problems.

3.5 National and International Law Regulating Pollution

There are several laws governing pollution in its entire sphere both nationally and international, from water pollution, to air, land and noise pollution generally.

There have been laws regulating water pollution before the Koko toxic waste tale and they ranged from River Basins Development Authorities Act No 25 of June 15, 1976, the Chad Basin Development Authority Act No 32 of August 14, 1973, the Sokoto Rima Basin Development Act No 33 of August 14, 1973, the Sea Fisheries Act No 30 of June 10 1971, the Oil in Navigable Water Acts No 34 of April 22, 1968.

The Petroleum Act of 1969 which specifically deals with prevention of pollution of water courses and the regulations under this Act contained in Petroleum (Drilling and Production) Regulations 1969.

The establishment of the Federal Environmental Protection Agency (FEPA) through Decrees 589 of 1988 and 59 of 1992 (as amended) then the National Environmental Standards and Regulations Enforcement Agency (NESREA) established in 2007 via the Act of Parliament as the backbone of environmental protection in Nigeria which replaced the Federal Environmental Protection Agency.

One of the boards set up to protect water pollution is the Governing Board for the National Oil Spill Detection and Response Agency (NOSDRA) which came into being by the Establishment Act 15 of 2006. This agency was established as part of overall strategy to bring about healthy and clean environment in the country especially in Niger Delta region (Punch, 2010).

The Official Regulation for the Control and Management of Noise is published in the National Environmental/Noise Standards and Control) Regulations 2009 Vol. 96, No 67. Government Notice No 288.

There are little or no regulation guiding air pollution in Nigeria Noxious Acts; the Lagos Public Health Bye Laws 1958 and the Criminal Code Act Cap 42, Laws of the Federation of Nigeria, 1958

The Courts have been alive to their responsibilities under civil liability since all the laws already mentioned come under criminal law. Ryland vs. Fletcher (1868 LR 3 HL p 330) is the umbrella under which the courts have dealt vividly with various environmental cases. The principle involved in this case is known as “Sic utere tuo et alienum non laedas” meaning “that one should not use one’s property or exercise one’s rights in such away as to interfere with the rights of others.

In Karagulamus vs. Kolawole Oyesile (1973) 3 UI.L.R, the fumes coming out of the defendants machines to the Plaintiff's bedroom were offensive to the Plaintiff who successfully sued.

Finally, the Land use Act 1978, is the main law regulating Land and all matter relating to Land pollution in Nigeria.

4.0 CONCLUSION

In conclusion, pollution is a day to day activity in our environment; it is however pertinent to note that pollution is an inevitable part of our life but with the promulgation and enactment of several Acts, the human action in polluting the environment will be greatly reduced.

5.0 SUMMARY

In summary we have discussed pollution generally ranging from the definition of the concept to the nature and history, types and sources, also to the effect of pollution to the populace in particular and the environment in general.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Define the term pollution and give a brief history of its evolution.
2. Write on four types of pollution and discuss their regulatory laws.

7.0 REFRENCES/FURTHER READING

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UNIT 4 OIL POLLUTION

CONTENTS

1.0 INTRODUCTION

It is important to note that this is one of the major sources of pollution in Nigeria apart from the ones that have been earlier discussed. In this study oil spills in the Niger Delta will be our main discourse. It is however important to note that oil spill is caused majorly by activities relating to petroleum exploration.

According to a study carried out by a team of Nigerian and international environmental experts in 2006, the Niger Delta is “one of the world’s most severely petroleum-impacted ecosystems”. They stated: “The damage from oil operations is chronic and cumulative, and has acted synergistically with other sources of environmental stress to result in a severely impaired coastal ecosystem and compromised the livelihoods and health of the region’s impoverished residents.”

2.0 OBJECTIVES

The main objective of this unit is to discuss oil spill and pollution generally and several cases that has been treated in that regard. The harmful effect of the surge cannot be overemphasised, it is also important that the laws regulating the spill will also be discussed in this unit.

3.0 MAIN CONTENT

3.1 Oil Spills

Most of the oil in Nigeria is found within the Niger River Delta, the largest delta in Africa and the third largest in the world. The inhabitants of the Niger Delta are primarily ethnic minorities, who are socially,

politically and economically marginalized. Oil spills and gas flaring are the most frequently referenced forms of oil-related pollution in the Niger Delta, there are in fact several other ways in which the oil industry is harming the environment.

The Niger Delta has suffered for decades from oil spills, which occur both on land and offshore. Oil spills on land destroy crops and damage the quality and productivity of soil that communities use for farming. Oil in water damages fisheries and contaminates water that people use for drinking and other domestic purposes. There are a number of reasons why oil spills happen so frequently in the Niger Delta. Spills result from corrosion of oil pipes, poor maintenance of infrastructure, spills or leaks during processing at refineries, human error and as a consequence of deliberate vandalism or theft of oil.

However, today companies increasingly maintain that the majority of oil spills are caused by sabotage and not by their poor infrastructure or operational problems. Communities, and many NGOs, strongly disagree over the number of spills that are attributed to sabotage, and accuse companies of designating controllable spills as sabotage in order to avoid liability for compensation.

There is no doubt that sabotage, vandalism of oil infrastructure and thefts of oil are serious problems in the Niger Delta, although the scale of the problem is unclear. Sabotage ranges from vandalism by community members to theft of oil and deliberate attacks by criminal groups. Some people damage pipes while trying to steal small quantities of oil for sale at local markets or for personal use. Others damage pipes and installations to extort compensation payments or clean-up contracts from companies.

The amount of oil spilled since oil production began in 1958 is not known with any certainty. Only SPDC reports publicly, from year to year, on the number of spills in its operations. Between 1989 and 1994 the company reported an average of 221 spills per year involving some 7,350 barrels of oil per year. The Department of Petroleum Resources (DPR) has reported that 4,835 oil spill incidents were recorded between 1976 and 1996, with a loss of 1.8 million barrels of oil to the environment. These data are based mainly on what companies report to the DPR. According to UNDP, more than 6,800 spills were recorded between 1976 and 2001, with a loss of approximately 3 million barrels of oil. Oil spill incidents have occurred in various parts and at different times along our coast. Some major spills in the coastal zone are the GOCON's Escravos spill in 1978 of about 300,000 barrels, SPDC's Forcados Terminal tank failure in 1978 of about 580,000 barrels and Texaco Funiwa-5 blow out in 1980 of about

400,000 barrels. Other oil spill incidents are those of the Abudu pipe line in 1982 of about 18,818 barrels, The Jesse Fire Incident which claimed about a thousand lives and the Idoho Oil Spill of January 1998, of about 40,000 barrels. The most publicised of all oil spills in Nigeria occurred on January 17 1980 when a total of 37.0 million litres of crude oil got spilled into the environment. This spill occurred as a result of a blow out at Funiwa offshore station. Nigeria's largest spill was an offshore well-blow out in January 1980 when an estimated 200,000 barrels of oil (8.4million US gallons) spilled into the Atlantic Ocean from an oil industry facility and that damaged 340 hectares of mangrove (Nwilo and Badejo, 2005).

Pirates are stealing Nigeria's crude oil at a phenomenal rate, funneling nearly 300,000 barrels per day from our oil and selling it illegally on the international trade market. Nigeria lost about N7.7 billion in 2002 as a result of vandalisation of pipelines carrying petroleum products. The amount, according to the PPMC, a subsidiary of NNPC, represents the estimated value of the products lost in the process. Illegal fuel siphoning as a result of the thriving black market for fuel products has increased the number of oil pipeline explosions in recent years. In July 2000, a pipeline explosion outside the city of Warri caused the death of 250 people. An explosion in Lagos in December 2000 killed at least 60 people. The NNPC reported 800 cases of pipeline vandalization from January through October 2000. In January 2001, Nigeria lost about $4 billion in oil revenues in 2000 due to the activities of vandals on our oil installations. The government estimates that as much as 300,000 bbl/d of Nigerian crude is illegally bunkered (freighted) out of the country.

3.2 The Harmful Effect of Oil Spill

The harmful effects of oil spill on the environment are many. Oil kills plants and animals in the estuarine zone. Oil settles on beaches and kills organisms that live there; it also settles on ocean floor and kills benthic (bottom-dwelling) organisms such as crabs. Oil poisons algae, disrupts major food chains and decreases the yield of edible crustaceans. It also coats birds, impairing their flight or reducing the insulative property of their feathers, thus making the birds more vulnerable to cold. Oil endangers fish hatcheries in coastal waters and as well contaminates the flesh of commercially valuable fish.

Oil spills in the Niger Delta have been a regular occurrence, and the resultant degradation of the surrounding environment has caused significant tension between the people living in the region and the multinational oil companies operating there.

One of the major oil spills that affected many lives negatively are the Idoho oil spill traveled all the way from Akwa Ibom state to Lagos state dispersing oil through the coastal states, up to the Lagos coast. This culminated in the presence of sheen of oil on the coastal areas of Cross river state, Akwa Ibom state, Rivers state, Bayelsa state, Delta state, Ondo state and Lagos state.

In April 1997, samples taken from water used for drinking and washing by local villagers were analyzed in the U.S. A sample from Luawii, in Ogoni, where there had been no oil production for four years, had 18 ppm of hydrocarbons in the water, 360 times the level allowed in drinking water in the European Union (E.U.). A sample from Ukpeleide, Ikwerre, contained 34 ppm, 680 times the E.U. standard.

However following the major Texaco Funiwa spill of 1980, it was reported that 180 people died in one community as a result of the pollution. On several occasions, people interviewed by Human Rights Watch said that spills in their area had made people sick who drank the water, especially children.

3.3 Laws and Policies regulating Oil Spills

There are several national and international laws regulating oil spills in Nigeria, some will be discussed in this unit and the purpose they each serve also.

a. Oil Pollution Act (OPA) of 1990

The Oil Pollution Act of 1990 (OPA 1990) is responsible for many of the nation's improvements in oil spill prevention and response. OPA 1990 provides guidance for government and industry on oil spill prevention, mitigation, cleanup and liability. The majority of OPA 1990 provisions were targeted at reducing the number of spills followed by reducing the quantity of oil spilled. OPA 1990 also created a comprehensive scheme to ensure that sufficient financial resources are available to clean up a spill and to compensate persons damaged by a spill.

b. National Oil Spill Detection and Response Agency (NOSDRA)

A National Oil Spill Detection and Response Agency (NOSDRA) have been approved by the Federal Executive Council of Nigeria.
The establishment of the contingency plan and the agency was in compliance with the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC90) to which Nigeria is a signatory. The draft bill on the NOSDRA has been forwarded to

the National Assembly for deliberation and enactment into law (Alexandra: Gas and Oil Connections, 2006).

c. The Niger Delta Development Commission (NDDC)

To reduce the rate of oil incidents along the Nigerian Coast particularly as a result of vandalisation, the Federal Government through an act of the National Assembly in 2000 passed into law the Niger Delta Development Commission. (NDDC).

The NNDC act is a strategic way of dealing with all forms of pollution activities in the Niger Delta like:

- Tackle ecological and environmental problems that arise from the exploration of oil in the Niger-Delta area.
- Liaise with the various oil mineral and gas prospecting and producing companies on all matters of pollution prevention and control.

d. Petroleum Related Laws and Regulations

The following relevant national laws and international agreements are in effect:

a. Endangered Species Decree Cap 108 LFN 1990.
b. Federal Environmental protection Agency Act Cap 131 LFN 1990.
c. Harmful Waste Cap 165 LFN 1990.
d. Petroleum (Drilling and Production) Regulations, 1969.
e. Mineral Oil (Safety) Regulations, 1963.
f. International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971.
g. Convention on the Prevention of Marine pollution Damage, 1972
h. African Convention on the Conservation of Nature and Natural Resources, 1968.
i. International Convention on the Establishment of an International Fund for the Compensation for Oil Pollution Damage, 1971.

e. Oil Trajectory and Fate Models for Oil Spill Disaster Monitoring

Oil spill simulation model is used in oil response and contingency planning and as a tool in oil fate and impact assessment (Rossouw, 1998). In the event of an oil spill taking place, predictions of the slick

can be supplied, provided that the necessary meteorological information is available (Rossouw, 1998). Oil spillage can also be treated or removed by natural means, mechanical systems, absorbents, burning, gelling, sinking and dispersion.

4.0 CONCLUSION

Oil spill in the Niger Delta of Nigeria has been the major surge of environmental pollution in that part of the world. It is also important to note that oil spill has been with us for a very long time. Adequate measures should be taken against sabotage, pipeline vandalism and illegal oil bunkering. Oil companies and the Federal Government should beef up security in the oil producing areas so as to reduce the dangers of environmental degradation.

5.0 SUMMARY

In summary, this unit has discussed oil spill in the Niger Delta area of the country. However, its adverse impact on the environment has been highlighted. It is also important that learners should be able to discuss and expatiate more on the laws regulating oil spill in Nigeria.

6.0 TUTOR MARKED ASSIGNMENT (MA)

1. Discuss the effect of oil spill in the Niger Delta.
2. Explain the laws and policies available to combat oil spill in Nigeria.

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MODULE 5

UNIT 1 HUMAN RIGHTS AND The ENVIRONMENT

CONTENTS

1.0 INTRODUCTION

International awareness of the linkages between human rights and environmental protection has expanded considerably since conservation of the environment became a matter of national and international concern some two decades after human rights emerged on the international agenda.

Generally, Environmental rights do not fit neatly into any single category or generation of human rights. We should talk about human rights and the environment within the existing framework of human rights law in which the protection of humans is the central focus – essentially a greening of the rights to life, private life, and property – or has the time come to talk directly about environmental rights – in other words a right to have the environment itself protected.

The Constitution of the Federal Republic of Nigeria 1999 has not really or specifically protect the rights of its citizens in relation to the environment; it only does that in the chapter 2 of the Constitution which is not specifically enforceable or justiciable.

2.0 OBJECTIVES

This unit will discuss the general right of a citizen as it concerns the environment. The obligation of states to the right to a healthy environment will also be discussed. At the end of the unit, students should be able to comprehend the issues at stake.

3.0 MAIN CONTENT

3.1 Human Rights and the Environment

International environmental agreements, especially since 1992, more commonly consider certain human rights as essential elements to achieving environmental protection. Birnie and Boyle define environmental human rights as: 'terminology [used] to ascribe value or status to the interests and claims of particular entities.' On the other hand, Churchill defines the term as '[...] broadly the right of an individual or group to a decent environment, [...] that extends beyond what is judicially enforceable but limited to genuine rights [...] as they are found in existing human rights treaties'.

However, the last definition seems to be the most useful for purposes of this unit 'Environmental right' in this report is the term used to describe both existing human rights with environmental implications (or derivative rights) and the emerging right to a clean and healthy environment.

Generally, human rights and the environment in this unit will discuss the right of an individual as it relates to its environment. The first approach is essentially anthropocentric insofar as it focuses on the harmful impact on individual humans, rather than on the environment itself: it amounts to a 'greening' of human rights law, rather than a law of environmental rights.

The second approach is seeing the environment as a good in its own right, but nevertheless one that will always be vulnerable to tradeoffs against other similarly privileged but competing objectives, including the right to economic development.
However, there are some significant examples of collective rights which in certain contexts can have environmental implications, such as the protection of minority cultures and indigenous peoples, or the right of all peoples freely to dispose of their natural resources, recognised in the 1966 UN Covenants on Civil and Political Rights and Economic, Social and Cultural Rights, and in the 1981 African Charter on Human and Peoples Rights.

It is important to note that some legal texts and authors proclaim the existence of a right to a safe and healthy environment as an independent substantive human right. At present, examples of this in positive law are found predominately in national constitutions, in regional human rights treaties and in International treaties. Thirty-five years ago at the United Nations Conference on the Human Environment held in Stockholm, Principle 1 of the Declaration declared that *'Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being.'* It was further stated that he bears a solemn responsibility to protect and improve the environment for present and future generations. This grand statement might have provided the basis for subsequent elaboration of a human right to environmental quality (Dinah Shelton).

Among human rights treaties only the 1981 African Charter on Human and Peoples' Rights proclaims environmental rights in broadly qualitative terms. It protects both the right of peoples to the 'best attainable standard of health' and their right to 'a general satisfactory environment favourable to their development.

Article 24 of the Charter imposes an obligation on the State to take reasonable measures 'to prevent pollution and ecological degradation, to promote conservation, and to secure ecologically sustainable development and use of natural resources. Article 11 of the American Convention on Human Rights in the area of Economic, Social and Cultural Rights is also a regional instrument like the African Charter on the protection of its citizens as it relates to the environment.

However, in similar circumstances the Inter American Commission and Court of Human Rights have interpreted the rights to life, health and property to afford protection from environmental destruction and unsustainable development and they go some way towards achieving the same outcome as Article 24 of the African Convention. See the case of Ogoniland and Maya indigenous community of the Toledo District v. Belize, Case 12.053, Report No. 40/04, Inter-Am. C.H.R., OEA/Ser.L/V/II.122 Doc. 5 rev. 1 at 727 (2004).

The European Convention on Human Rights makes no explicit reference to the environment at all or did so only in relatively narrow terms focused on human health. If Stockholm did little for the development of international environmental rights, it may have had greater impact on national law. Environmental provisions of some kind have been added to an increasing number of constitutions since 1972.

A human rights dimension has also emerged in the context of climate change discussions. Resolution 7/23 entitled "human rights and climate

change", adopted by the Human Rights Council in March 2008, expressed concern that "climate change poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights".

However, on 25 March 2009, the Council adopted resolution 10/4 "Human rights and climate change" in which it, inter alia, notes that "climate change-related impacts have a range of implications, both direct and indirect, for the effective enjoyment of human rights ..."

3.2 States Obligations on Human Right and the Environment

Enforcement of environmental rights involves courts in not only determining the mandated environmental quality, but also in assessing whether or not the government has taken the requisite actions to achieve that quality.

It is pertinent to note that rights-based approaches are preferable, however, because human rights are maximum claims on society, elevating concern for the environment above a mere policy choice that may be modified or discarded at will. Some clearly create no rights based approach towards the right of its citizens as it concerns the environment.

Article 48A of the Indian Constitution provides only that 'The state shall endeavour to protect and improve the environment and to safeguard the forests and wild life of the country. This article obviously creates no enforceable rights.

Nigeria as a nation is also not specific as this right is not drafted under Chapter 4 of the constitution which talks about the fundamental human right of the people rather under chapter 2, section 20 which states that "the state shall protect and improve the environment and safeguard the water, air and land, forest and wild life in Nigeria this is a right that is not enforceable. However, some constitutions have lived up to their responsibility Article 35 of the Constitution of the Republic of Korea declares that 'All citizens shall have the right to a healthy and pleasant environment.

However, others give it stronger human environmental rights for instance, Article 45 of the Spanish Constitution declares that everyone has 'the right to enjoy an environment suitable for the development of the person as well as the duty to preserve it.'

Article 56 of the Turkish Constitution states that: 'Everyone has the right to live in a healthy, balanced environment. It shall be the duty of

the State and the citizens to improve and preserve the environment and to prevent environmental pollution.

The 1996 South African Constitution gives everyone the right 'to an environment that is not harmful to their health or well-being; and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

In Yanomami v. Brazil, Res. No. 12/85, Case 7615 (Brazil), in Annual Report of the IACHR 1984-1985, the Inter-American Commission found that the government had violated the Yanomani rights to life, liberty and personal security guaranteed by Article 1 of the Declaration, as well as the right of residence and movement (Article VIII) and the right to the preservation of health and well-being (Article XI) because the government failed to implement measures of "prior and adequate protection for the safety and health of the Yanomami Indians."

However, in Okyay and Others v. Turkey concerned the failure of Turkish authorities to enforce constitutional rights and statutory environmental laws.

The African Commission also has identified governmental obligations in this field by reference to environmental norms. In *SERAC v. Nigeria*, Case No. ACHPR/COMM/A044/1, May 27, 2002. The African Commission held that Article 24 "imposes clear obligations upon a government to take reasonable and other measures to prevent pollution and ecological degradation, to promote conservation, and to secure an ecologically sustainable development and use of natural resources.

4.0 CONCLUSION

It is important to note that right to the environment is a fundamental human right that should be followed to the letter. It is suggested that most states should do more about enforcing this right, country like Nigeria should make it a fundamental human right such as South Africa and Turkey.

Regional instruments like the African charter should be alive to its responsibilities such as protecting the rights of its citizens as it concerns the environment.

5.0 SUMMARY

In summary we have discussed the human right in relation to the environment and the state obligations in that regard and the role of the courts in enforcing this unique human right as it relates to the environment.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Explain the concept of human right and the environment in line with the Stockholm declaration.

2. Briefly outline the state obligations as it concerns its citizen's right in relation to the environment.

7.0 REFERENCES/ FURTHER READING

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UNIT 2 INTERNATIONAL AND REGIONAL ENVIRONMENTAL LAWS AND CONVENTIONS

CONTENTS

1.0 INTRODUCTION

International and regional law is relatively a new subject, but there are laws and policies to support the subject to its fullest. It is apt to point out that there are lots of international laws that have done well in protecting the environment and the citizen's right in that regard.

The regional efforts are also not left out of this campaign for environmental protection. The Stockholm Declaration is the first of the international laws that was set for the protection of the environment and it came into force in 1972, followed by the Rio Declaration of the 1992.

Naturally, international environmental law consists primarily of treaties, conventions, protocols and other international legal instruments. Nigeria as a nation is a signatory to many of these treaties dealing with the environment. However, only few will be discussed in this unit.

2.0 OBJECTIVES

This unit will discuss the international and regional laws and policies as it relates to the environment. The first on the list of our discussion is the Stockholm declaration, the Basel Convention, the Kyoto Protocol, and the Copenhagen Accord. However, the main regional Declaration is the African Charter on Human and People's Right and lastly the Bamako Convention. At the end of the unit learners should be able to discuss these international and regional laws and policies.

3.0 MAIN CONTENT

3.1 The Stockholm Declaration of 1972

The United Nation Conference on the Human Environment is generally referred to as the Stockholm Declaration and is considered as the cornerstone of modern international law. The declaration also affirms the sovereign right of states to exploit their own resources pursuant to their own environmental policies in accordance with the United Nations Law.

However, the counterpart to this treaty is the Rio Declaration which came into existence in 1992, and the principle is generally the responsibilities of states in view of their different contribution to global environmental degradation and the need to reduce and eliminate unsustainable patterns of production and consumption.

3.2 The Basel Convention 1989

This is a convention on the control of Trans-boundary Movement of Hazardous Wastes and their Disposal, and it came into force in 1989. Nigeria as a nation is a signatory to this convention. This is one of the major international treaties after the Koko toxic saga in Nigeria.

The Convention was to protect by strict legal control, human health and environment against adverse effect, which may result from generation and management of hazardous waste.

One of the significant attributes of this convention under Article 8 is that if wastes are smuggled into the territory of one state without the competent authority's consent or such consent by fraud, such waste can be returned back by the country. This was however, the case in Koko toxic incident, where Nigeria as a country returns the waste back to Italy.

3.3 The Kyoto Protocol

This was the convention that brought about the Green house gas effect and the depletion of the ozone layer, the global warming inspires world leaders to deliberate. It was adopted on 11 December, 1997 in Kyoto, Japan but came into force on 16 February, 2005 after so many nations have ratified. As at September 2011 191 states have signed and ratified the protocol with exception of USA, Afghanistan, Andorra and South Sudan. The purpose is treating the green house gases instead of allowing it to radiate back into space.

3.4 The Copenhagen Accord 2010

The Copenhagen Accord is a document that delegates at the 15th session of the conference of parties (COP 15) to the United Framework Convention on the Climate Change agreed to take note of at the final plenary on 18 December, 2010. It is not a legally binding document and does not commit countries to agree to a binding successor to the Kyoto Protocol, whose present round ends in 2012.

The Accord:

- Endorses the continuation of the Kyoto Protocol
- Underlines that climate change is one of the greatest challenges of our time and emphasizes a strong political will to urgently combat climate change in accordance with the principle of common but differentiated responsibilities and respective capabilities
- To prevent dangerous anthropogenic interference with the climate system, recognizes "the scientific view that the increase in global temperature should be below 2 degrees Celsius", in a context of sustainable development, to combat climate change.
- Agrees that developed countries would raise fund of $30 billion from 20102012 of new and additional resources.
- Agrees a goal for the world to raise $100billion per year by 2020, from a wide variety of sources, to help developing countries cut carbon emissions (mitigation). New multilateral funding for adaptation will be delivered, with a governance structure.

3.5 The African Charter on Human and People's Right 1981

The charter was adopted in 1981, the aspect of the charter that treated environmental issue was particularly the Article 24, and this is the first international instrument to proclaim the right to a satisfactory environment as a human right to which all people are entitled.

The main reason behind the charter was a response to the danger pose by the export of toxic waste from Europe to Africa. It also represents sustainable development of the continent.

3.6 The Bamako Convention

This was a convention that came into existence as a result of the dissatisfaction of developing countries with the Basel Convention over the partial ban on trans-boundary movement of hazardous waste.

The Bamako Convention permits the trans-boundary movement of waste within Africa, so that the prohibition is therefore limited to importation into Africa.

4.0 CONCLUSION

It is important to note that International Environmental law like the Conventions, Protocols and Accord has attained the standing of an independent discrete subject with its own principles.

5.0 SUMMARY

In summary, we have discussed most international environmental law that are most relevant, ranging from the Stockholm Declaration to the Copenhagen Accord, which is the latest in the environmental world. Learners are expected to read more on the laws that are not discussed here to broaden their knowledge of the international environmental law.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Discuss the African Charter on Human and People's Right as an instrument of International Environmental Law.

2. Discuss the purpose of the Bamako Convention that the Basel Convention did not address.

7.0 REFERNCES/FURTHER READING

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The African Charter on Human and People's Rights 1981

UNIT 3 THE DEVELOPMENT OF INTERNATIONAL ENVIRONMENTAL LAW

CONTENTS

1.0 INTRODUCTION

In recent years there is worldwide concern for the deterioration of human environment as a result of the impact of science, technology and population growth on the global landscape (Ndukwe, 2000). Thus, environmental preservation and protection constitute one of the greatest challenges of the modern world. This is on the recognition that the preservation of a nation's natural resources, determines the sustainability of its development and growth.

It therefore follows that conservation of natural environmental wealth is an essential principle to be observed in the exploitation of nature's bounty if it is accepted that natural resources are not earmarked solely for the use of present humanity but are also meant to provide for future generations. Moreover, no state could exclusively appropriate natural resources of the environment and ignores the essential aspect of common heritage of the global community. Natural resources are therefore meant to be an everlasting gift to mankind not only for the present but also for the future., Scientific conservation of natural resources as well as the principle of due regard to the interest of others remain the vital pillars of the environmental law of today.

Environmental pollution and degradation has no respect for geographical delimitations or knows no boundaries. For this reason, natural boundaries cannot be adequately protected by individual country is located efforts. General international law

principles, therefore, oblige each nation to take such measures as may be necessary to a practicable extent to ensure that activities within its territory conform to generally accepted international law standard for the prevention of injury to the environment of another state (Umozurike, 1993). Therefore, states are, under customary law, obliged to use or utilize their property in such a way as not to impede other states' enjoyment of their own property (Wolf and White, 1997). This is expressed in the Latin maxim *sic utere tuo ut alienum non ladas.* The problems of acid rain and global warning testify to the fact that pollution does not respect national boundaries. It has no terminal limits. International environmental law is therefore a matter of international concern requiring international cooperation.

2.0 OBJECTIVES

By the end of this unit, you be able to:

- understand the need for the development of international environmental law
- explain the historical perspective of the development of international law
- understand the nature of the principles of environmental law
- understand the concept of sustainable development

3.0 MAIN CONTENT

3.1 The need for the development of International Environmental Law

Environmental issues have assumed a global dimension. Mankind is threatened global environmental changes of which all humanity is responsible (Ndukwe, 2000).

The problems of acid rain and global warning caused by the emission of greenhouse gases such as carbon dioxide, methane, chlorofluoro-carbons (CFCS) and nitrous oxide, is a major environmental concern and cannot be tackled on a fragmented national basis within the geographical limits of a state. It demands an international response. So also are the problems of marine pollution, and trans frontier or international movement of shipment of hazardous wastes. To the extent that environmental hazards may be caused by activities beyond national borders and their effect transcends such borders have to some extent become matters of international concern.

One field in which international law is in urgent need of development is that of the protection of the environment and the problems of maintaining sustainable development. The need for the development of international environmental law is succinctly put by the World Commission on Environment and Development:

> "Today, legal regimes are being rapidly outdistanced by the accelerating pace and expanding scale of impacts on the environmental base of development. Human laws must be reformulated to keep human activities in harmony with the unchanging and universal laws of nature."

In view of the foregoing, statement by the World Commission on Environment and Development (WCED), there is an urgent need to accelerate efforts by sovereign nations 01 the world to attempt to do the followings:

(a) to recognise and respect reciprocal rights and responsibilities of individuals and states regarding sustainable development;
(b) to establish and apply new norms for State and inter-State behaviour to, achieve sustainable development;
(c) to strengthen and extend the application of existing laws .and international k. agreements in support of sustainable development; and
(d) to reinforce existing methods and develop new procedures for avoiding and resolving environmental disputes.

International Court of Justice, under the auspices of the United Nations, is in the better position to develop the international environmental law. However, the opportunities afforded the court of contributing to the development of any aspect of international law would depend entirely on the number and nature of cases submitted to it. The development of this kind is, as it were, a by-product of the essential role of the court in the decision and settlement of inter-state disputes, and the court has no initiative to take in hand a particular field of law that appears in need of revision. Such' a need of revision may of course be the result of accelerated development of that field) of law, which may also produce a series of disputes, which may be referred to the court for adjudication.

The International Court of Justice has little opportunity to contribute to the development of international environmental law until few years ago. The reasons for this were that, law of environment and two; there was no proper machinery for settlement of environmental disputes. It may be that the subject of environment is covered to some extent by many of the existing principles of

international law, but a certain amount of codification is still essential, as it also the addition of new principles to be formulated to regulate the ever increasing environmental pollution and the exhaustion of natural resources which was and is threatening the very existence of the human race. It would be desirable that environmental disputes, to the extent that they ire disputes on matters of international law, should be brought before the international Court of Justice for authoritative and prudent settlement on the basis of law. The court is certainly in a position to help and full use of it should be made. For this reason, the desirability of establishing a special chamber of the Court under Article 26, paragraph 1; if the statute to deal with the category of cases comprising disputes concerning the protection of the environment has been advocated (Nagendra, 1989).

The court, in consequence, decided that it was not necessary to set up a permanent chamber of the court for environmental disputes, but categorically stated that "let it Is known to the community of nations that the court was fully competent to entertain environmental disputes if the parties so referred to it and: that a special chamber would be created for any particular dispute that was brought before it if the parties so desired (ICJ Report, No. 4).

This fact was mentioned in the *Annual Report* of the Court to the United Nations General Assembly so that the availability of the existing machinery of the court should be fully known to the member states of the United Nations.

It needs to be emphasised that conservation of natural environmental wealth is an essential principle to be observed in the exploitation of natures bounty of it is accepted that natural resources are not earmarked solely for the use of Present humanity but are also meant to provide for future generations. Again; no state could exclusively appropriate natural resources of the environment and ignores the essential aspect of common heritage of the global community; as such resources are meant to be an everlasting gift to mankind not only for the present but also for the future. Hence scientific conservation of natural resources as well as the principle of due regard to the interests of others remain the vital pillars of the environmental law of today.

Due to the growing importance of the development of environmental law, what is essential is that there should be a generally recognised method of settling environmental disputes and one which enjoys the authority and prestige at present attaching to the International Court of Justice. This is because individuals and even states are more reluctant to act in a way that might lead to a dispute when, as in

many national legal system, there is an established and effective capacity as well as ultimately binding procedures for settling disputes. Since such a capacity and procedures are largely lacking at the international level, particularly on environmental and natural resources management issues, it make disputes on such issues difficult to resolve; thereby jeopardizing the protection of environment at international level.

3.2 Historical perspectives on the development of International Environmental law

The environment is the source of the energy and materials which mankind transforms into goods and services to meet his needs. It also acts as a vast sink for the wastes and polluting substances he generates. It provides a number of basic conditions needed for the existence of a successful economy, such as stable climate, among others.

Environmental resources form the basis of, and therefore set limits to, economic development. Many environmental problems are rooted in an increased demand for natural resources, and in the increased pollution and waste associated with current patterns of economic development.

Over the course of the last century, the relationship between human beings and the planet on which they live changed fundamentally. At the beginning of the century, it was not possible for mankind and the technology upon which he relied to alter the environment radically. By the end of the century, huge increases in scientific knowledge had given man the power to make irrevocable changes to the planet. Most people's understanding of the environment now tends to be that it is ever deteriorating. Resources are being depleted. The population is increasing, which means less to eat. The water and air are more polluted. Species and habitats are becoming extinct in vast numbers, and forests are disappearing.

Environmental law therefore originated as a collection of rules that grew up sporadically, as a haphazard and piece meal response to specific environmental problems, but has now achieved a certain amount of coherence in the sense that if has a clear and unified philosophical foundation. There are three main philosophical approaches to the study of environmental law: the anthropocentric, biocentric and ecosentric approaches.
The current environmental law is based mainly on an anthropocentric philosophy. The basic tenet of this philosophical

thought is that mankind is inherently separate from the rest of the nature, and that natural resources are to be exploited for the benefit of mankind. The welfare of mankind is therefore to be accorded primary importance in any regime for environmental protection. Conservation of natural resources and environmental amenities is justified on the basis of "stewardship", meaning that the present generation should hold environmental assets in trust for future generations. This has received judicial approval by the House of Lords in the case of *Cambridge Water Co. v. Eastern Counties Leather Plc*, where it was stated that "the protection and reservation of the environment is now perceived as being of crucial importance to the future of mankind ."

The biocentric viewpoint argues that, in any scheme for environmental protection, animals should have rights, which are equal to those of humans. On this philosophy, animals are not at the service of mankind. Rather, they co-exist within him in nature and are deserving of protection for their own sake. This approach is reflected in laws, which protect animal welfare.

The ecocentric viewpoint adopts a holistic approach to the environment and holds that humans, animals and plant have values only as part of an ecological system. Natural ecosystems are therefore seen as having an intrinsic value, irrespective of the existence of animals and mankind. Plants are thought to have an intrinsic right to protection, which is independent from the uses to which they are put, by animals and human beings.

Having seen the philosophy behind environmental protection, our attention will now focus on the historical development of international environmental law.

Although international rules on environmental concerns date from the early nineteenth century, international environmental law came of age in the 1970s, with the adoption of the Stockholm Declaration at the first international conference on the environment in 1972. The principles in that declaration have provided the foundation for modern international environmental law.

Note that international rules on environmental concerns in the early nineteenth century, centred on the exploitation of natural resources as a result of growing industrialization. Thus, a number of bilateral treaties were signed with the aim of conserving fishing stocks, but pollution and other ecological issues were not addressed. International response to environmental issues was

characterized by ad hoc reactions to immediate problems, but was significant nonetheless because it recognized that co-operation between states was necessary.

In 1893, a dispute between the United States and Great Britain over the exploitation of seals for fur was submitted to international arbitration. The finding of the tribunal established an important principle which is still significant today, i.e., that the states did not have the right to assert jurisdiction over natural resources which were outside their territory in order to ensure their conservation. In 1914, the *Trial Smelter case* arose. This was a dispute between Canada and the United States over the emission of sulphur fumes from Canadian smelting works, which caused damage to crops, trees and pastures in the United States. The two states agreed to submit the matter to arbitration. The tribunal held that under International Law: ...no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.

The principle in the above case was later to be expressed in the Stockholm Declaration and subsequent declarations on environmental protection.

3.3 Nature of the principle of International Environmental Law

International environmental law has developed a set of principles, which underpin its rules. The reason behind this is that since international law is formed by a consensus of ideas and behaviour between states, it is extremely difficult to determine at what stage an obligation in a treaty can be said with certainty to have formed a principle of international law binding on all nations. Thus, these principles are established to provide the basis for a cause of action in an international court. Some of these principles include the followings:

to The "no-harm" rule;
The principle of state co-operation;
The "precautionary" principle;
The "polluter pays" principle;
The principle of "common but differentiated responsibility";
Sustainable development;
Meeting the needs of future generations;
A duty to protect the domestic environment;

Procedural obligations; and
A human right to a healthy environment.

The "no-harm" rule

This principle is contained in both the Stockholm Declaration of 1972 and the Rio Declaration of 1992: By principle 21 of the Stockholm Declaration of 1972, "states have... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction."

This rule is the most fundamental rule of international environmental law and it regulates state behaviour in respect of trans-boundary pollution. Although state have the sovereign right to exploit their own resources pursuant to their own environmental policies, the "no-harm" rule represents a careful balance between the territorial sovereignty of a state, and a wider responsibility not to cause harm by trans-boundary pollution. The rule was applied by the International Court of Justice in the *Corfu channel case.* In that case the International Court of Justice (ICJ) held that Albania was responsible in international law for failing to inform the UK about the presence of mines laid in its territorial waters. It was further held that every state has a duty not to knowingly allow its territory to be used for activities that are contrary to the rights of other states.

The rule is now accepted as the rule of customary international law, and its status as such has been recognized by the international court of justice. In the court's advisory opinion on the legality of the threat or use of nuclear weapon, it was stated that:

> ...the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of states to ensure that activities within their jurisdiction and control respect the environment of other states or of areas beyond national control is now part of the corpus of international law relating to environment.

The principle of state co-operation

Although some writers are of the view that the practical requirements of the principles of state co-operation remain unclear, the principle that the state should co-operate in, the field of environmental protection is affirmed in virtually all

international environmental agreements. The preamble to the Rio Convention on Biodiversity, for example, stresses the necessity and importance of promoting international or global and regional co-operation among states. In terms of Rio Declaration, "state and people shall co-operate in good faith and in a spirit of partnership and fulfilment of the principles embodied in this Declaration and in the further development of international law in the field of sustainable development."

The "precautionary principle"

All the international treaties or conventions that provide for the precautionary principle do not define the principle. However, it is generally accepted that the principle means that lack of full scientific evidence should not be used as a reason for postponing measures to prevent environmental degradation. In other words, acting in accordance with the principle is justified on the basis that the damaging effects of human activities may become irreversible before the scientific community can agree about the precise nature of those effects.

It has been stated in the preceding paragraphs that a single, precise definition of the term 'precautionary principle' does not exist. In 1990, the principle was set out as part of the conservative government's White Paper- on environmental policy in England. In the document commonly referred to as the "Common Inheritance", it was stated:

> "Where there are significant risks of damage to the environment, the government will be prepared to take precautionary action to limit the use of potentially dangerous materials or the spread of potentially dangerous pollutants even where scientific evidence is not conclusive, if the balance of likely costs and benefits justifies it."

A commonly cited definition of precautionary principle is that contained in 1990 Bergen Ministerial Declaration on Sustainable Development where it was stated that:

> "Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation."

The Rio Declaration of 1992 recognized the precautionary principle, although the Rio Declaration contained a clause, which qualifies the application of the principle. Thus such terms as

"applied by the states according to their capabilities" and "cost--effective measures" are incorporated into the Rio Declaration.

The court in *R v. Secretary of State for Trade and Industry, Ex parte* Duddridge considered the meaning of the principle, as set out in the common Inheritance referred to above. The case was an action for judicial review by the parents of three children concerned that their exposure to power cables would increase the risk of leukaemia. The applicants submitted that the government had misinterpreted the precautionary principle by setting the threshold of preventive action where a significant risk of damage arose. They argued that the principle required action to be taken as soon as any possible risk was demonstrated. In rejecting this argument, the court observed that the principle "is primarily intended to avoid long term harm to the environment itself rather than damage to human health from transitory environmental conditions."

The precautionary principle, also known as 'prevention principle', was made part of the European Community policy for the first time in 1993 by the Maastricht Treaty of that year. The treaty did not define the principle, however; under the European union, the principle is also understood to provide a solution to the dilemma arising from the limits of current scientific knowledge. The precautionary principle requires measures to be taken to protect the environment despite scientific uncertainty about the likelihood of harm, for example, where there is no scientific proof of a causal link between emissions and their effects. The principle can therefore be viewed as a mechanism to help manage risk. An example of the application of the precautionary principle under the European Union is the adherence to the requirements of Kyoto protocol, in spite of the fact that some take the view that there is uncertainty surrounding the scientific evidence about the effect of mankind's activities on climate change. In *Pfizer Animal Health SA v. Council of the European Union*, the European Court of Justice (ECJ) considered the interpretation and correct application of the precautionary principle. The case concerned a directive, which, because of a potential health risk, withdrew authorization for an antibiotic formerly added in small quantities to animal feed. The court held that the principle would apply in situations where there was a risk to human health, which, although not founded on mere hypothesis, was not scientifically confirmed. A scientific risk assessment by expert should be carried out before preventive measures are taken, and the scientific advice obtained must be based on the principles of excellence, independence and transparency. Such evidence must provide a sufficient indication

to conclude, on an objective scientific basis, that there is a risk to human health.

Perhaps all that can be said with certainty about the precautionary principle is
that:

> It is a culturally framed concept that takes cue from changing social conception, about the appropriate role of science, economics, ethics, politics and the law in proactive environmental protection and management. It is a rather symbolic concept muddled in policy advice and subject to the whims of international diplomacy and the unpredictable public mood over the true costs of sustainable living.

The "polluter pays" principle

This principle embodies the idea that the polluter should bear the expense of carrying out measures decided upon by public authorities as necessary to ensure that the environment is in an acceptable state. In other words, the principle require that the polluter, rather than society at large, must pay the cost of environmental clean-up required as a result of his polluting activities.

In Nigeria, the principle is provided for by the Federal Environmental Protection Agency Act, 1990. According to Section 21 of the said Act:

Except where an owner or operator can prove that a discharge was caused solely by a natural disaster on an act of war or by sabotage, such owner or operator of any vessel or onshore facility from which the hazardous substance is discharge...shall be liable for:

(a) the cost of the removal thereof and (b) costs of third parties in the form of reparation, restoration, restitution or compensation as may be determined by the Agency from time to time.

The polluter pays principle is a modern innovation in fixing liability on the polluter of the environment. It is aimed at ensuring that the cost of environmental damage caused by polluting activities is borne in full by person responsible for such pollution. This is in accord with the opinion of Wolf and White (1997). According to them, the principle means:

a) That the polluter should pay for administration of the pollutions control system, and
b) The polluter should pay for consequences of the pollution for example, compensation *and clean* up.

At the international level, the principle is provided for in the Rio Declaration, which states:

> National authorities should endeavour to promote the internalization of environmental cost and the use of economic instruments taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment."

The difficulty surrounding the principle is two-fold. First, in order to make the polluter pay, it must first be ascertained whom it is appropriate to regard as a polluter. For example, where a car causes pollution, is the polluter the manufacturer of the car, the producer of the fuel, or the driver of the car? Second, if the principle is to be applied fairly, it must be ascertained to what extent the polluter has degraded the environment, and the extent of that degradation must then be given a precise monetary value. This involves the "valuing" of environmental amenities which is extremely difficult to accomplish with accuracy.

3.4 The concept of Sustainable Development

The concept of "sustainable development" originated in a realization that the world's environment, its economies and the ways in which it treats its human and animal inhabitants, are all interlinked. The concept has been defined in numerous ways, but the most widely accepted definition is that given in the Brundtland Report:

Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

It has been suggested that there are four elements to the concept:

a. The need to preserve natural resources for the benefit of future generations (known as the principle of intergenerational equity);
b. The aim of exploiting natural resources in a manner which is sustainable or prudent (i.e. the principle of sustainable use);
c. The equitable use of natural resources, implying that, in using resources, states must take account of the needs of other states (i.e., the principle of equitable use or intergenerational equity);
d. The need to ensure that the environmental considerations are integrated into the economics of development plans, and that development needs are taken into account in applying environmental objectives (i.e. the principle of

integration).

The development of the concept is anchored on the recognition that protection of the environment cannot be considered in isolation from economic and development decisions. This is the cornerstone of the Bruntdland Reports which found that poverty was the mainstay of many environmental problems.

This was more visible in the developing nations of the world. Not only were the-developing nations promoting industrial growth on the scale of their more developed neighbours, which brought with it associated environmental problems, but measures, to tackle poverty on the most basic level were causing environmental damage. For' example, the destruction of vegetation to obtain food, or timber for fuel and building left land unprotected so that its soil was washed away by rain. Without adequate soil, the land no longer retained water and became incapable of producing further food timber, forcing the population to turn to new land and repeat the process of destruction. The consequence of this is that land degradation had caused millions of environmental refugees to cross national borders, especially in developing nations.

The international community first made a substantial effort to engage with the principle at the Earth summit in Rio de Janeiro in 1992. An agenda of action was adopted which mapped out an ambitious and wide-ranging programme needed to move towards sustainability. A key element in that programme was that individual countries should establish their own sustainable development strategies.

The principle of common but differentiated responsibility

According to principle 7 of the Rio Declaration:

> In view of their different contributions to global environmental degradation, states have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they have in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

The above principle embodies the idea that some states have different environmental concerns and responsibilities from others. In the other words, the principle is based on the recognition that developing countries have special need to which priority must be accorded. At the Rio Conference therefore, developing nations made it clear that they would only participate in international

environmental protection measures if they were given an incentive to do so. They took the view that it was unfair for the economically developed world, which have been able to industrialize at the expense of the environment, to deny the developing world a similar opportunity in the name of environmental protection.

Note that developing nations and developed nations often have very different priorities in terms of environmental problems. The environmental problems of developing nations are often directly related to poverty, while those of developed nations are related to excessive industrialization and high-consumption lifestyles. However, the concerns of developed nations dominate the agenda of international environmental law at the expense of the more immediate concerns of developing nations. A good example is the much international activity and debate in relation to climatic change and ozone layer depletion, even though their effects have not yet been significantly felt. On the other hand, developing nations are face*d* with more pressing environmental problems - dirty drinking water which fails to meet any basic safety standards, acute respiratory infection, caused by unsafe air, etc. In the words according to Dunoff:

> "Although global warming has yet to kill a single human being, and may not do so for centuries, it has received enormous attention and resources. At the same time silent emergencies that are killing people every day do not attract the same kind of screaming headlines and well-funded action plans:"

As a result of the views expressed at Rio Conference, it would seem that much of the developed world may now have accepted that it most pay a higher price than developing nations for global environmental problems. Thus, the preamble to the Rio Convention on Climate Change notes that per capita emissions of green house gases in developing countries are still relatively low, and recognizes the special difficulties of developing countries, whose economies are particularly dependent on fossil fuel use. On the other hand, whereas the developed countries are required under the convention to limit their green house gas emissions, developing nations are required only to limit their emissions in accordance with the extent to which the developed nations fulfil their commitments to transfer finance and technology to the developing countries for that purpose. The implication of this is that the developed world must pay the developing world to refrain from polluting activities. The extent to which the developed world would accept this aspect of the principle of common but differentiated responsibility is what we are, waiting to see.

The principle of meeting the needs of future generations

This principle is contained in the definition of sustainable development offered by the Brundtland Report. By this principle states have a duty to protect the environment not only for current inhabitants of the earth, but for future generations as well. The idea is to hold the world in trust for future generations. Several international environmental instruments provides for this principle. For example, Principle 1 of the Stockholm Declaration states that man bears "a solemn responsibility to protect and improve the environment for present and future generations." In the same vein, the Rio Declaration states that "the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations,"

This principle, which is also known as the "principle of intergenerational equity" is, as a matter of environmental philosophy and practical implications, open to a number of different interpretations. On one view, the principle holds that the next generation of mankind must inherit a stock of environmental assets such as green fields, clean air, etc., no less than the stock inherited by the present generation. On another, wider view, however, the principle of inter-generational equity may be satisfied by leaving to the next generation a stock of assets and "know-how". This second view recognizes that in some respect environmental resources can be “traded-off” against technology. In other words, technology can be substituted for environmental assets, while still securing an appropriate standard of living for the next generation. The implication of this second view is that, the future generations who have access to computer-generated “virtual environments” will have less need for real ones. The question is, can technological assets properly speaking, be a substitute for environmental ones. It is not possible.

The principle entrenched in Procedural Obligation of States

A number of international environmental instruments impose obligations on states to carry out procedural steps before commencing activities that may cause environmental damage. Such obligations include duties to:

(i) Carryout an "environmental impact assessment" as part of the decision-
making procedures for project, which could impact on the environment[45.] Nigeria has complied with this procedure by

enacting the Environmental Impact Assessment Act, 1992. By this Act, private, local, state and federal agencies in issuing licenses or authorities for the carrying out of any project involving harmful and/or hazardous substances must do so in satisfaction of environmental preservation as provided for under the Act.

(ii) Notify states potentially affected by certain activities;
(iii) Exchange information on a regular basis;
(iv) Enter into consultations.

The purpose of these procedural obligations, according to Thorton, is to concentrate the mind of those involved in potentially environmentally harmful activities, and give other states a chance to assist in minimizing environmental impacts." Note, however, that this principle does not remove or supersede the principle of sovereignty of states. Thus, the duty to "consult" for instance, does not imply that the consent of an objecting state must be obtained before an activity goes ahead. However, where trans-boundary pollution is involved, procedural obligations clearly have a part to play in determining the scope and meaning of the "no-harm' rule stated above.

The Principle of Duty to Protect the Domestic Environment

We have stated above that a principle requiring states to protect their domestic environment would amount to a significant encroachment upon the rule that a state is sovereign over its own environmental resources. However, modern international environmental law is developing the concept that some environmental resources might be regarded as the common concern of mankind. This indicates a desire to bring certain domestic environmental issues within the control of the wider international community even though, it may infringe on the sovereignty of the state concern. It also indicates a change in emphasis away from the ability of states to exploit their own resources, towards the idea that states have an obligation to protect their own environment for the benefit of others. The "common concern" concept was therefore, included in the preamble of the Rio Convention on Climate Change to the effect that "the change in the earth's climate and its adverse effects are a common concern of mankind."

The implication of the emerging idea that states should protect their domestic environment for the benefit of others, has been that states are increasingly inclining to assume obligations of a procedural nature, discussed above, which require them to notify

and consult with other states before taking action with environmental consequences.

3.5 Efforts of International Court of Justice in the development of International Environmental Law

The opportunities afforded the International Court of Justice of contributing to the development of any aspect of international law depend entirely on the number and nature of cases submitted to it. The court has contributed immensely in the development of international law in the field of the law of the sea, the law of decolonisation, the law of treaties, the law of international organisations and much more_

Here we shall limit out discussions to the efforts of the International Court of Justice to the development of international environmental law. In doing so, we shall attempt to highlight some decisions or pronouncements of the court in disputes that come before it. This is to show how the court has committed itself to the issues of environmental protection and conservation of natures' natural resources both for the present and future generation of mankind. The following cases will be considered.

Case one

The first case concerns an aspect of continental shelf delimitation which arose in the *North Sea Continental Shelf cases*. The matter is treated as follows in the judgment of the Court:

The natural resources of the subsoil of the sea in those parts, which consist of continental shelf, are the very object of the legal regime established subsequent to the Truman Proclamation. yet it frequently occurs that the same deposit lies on both side of the line dividing a continental shelf between two States and since it is possible to exploit such a deposit from either side, a problem arises on account of the risk of prejudicial or wasteful exploitation by one or other of the states concerned.

As has been pointed out, this decision is entirely reasonable and appropriate bearing in mind not only the fact that at that time the need of the protection of the environment were less pressing and less generally known, but also of the comparatively primitive stage of development of the law of maritime delimitation. The *North Sea Continental Shelf* judgement in itself constituted an important development in international environmental law in establishing the primacy of equitable principles, the appreciation of which should

take account of all relevant circumstances, and of the principle of natural prolongation. The observation of the court that the relevant circumstances could, at least in the case of unity of deposit; include environmental considerations is commendable as a bold step towards the development of environmental law at international level.

To fully appreciate the impact of the decision of the court in the North Seas Continental Shelf cases, there is need to elucidate further on the meaning of continental shelf. The Meaning of continental shelf was explained in a recent Supreme Court of Nigeria judgment in the case of *Attorney-General of the Federation v. Attorney-General of Abia and 35 Others.* In that case, Continental Shelf was said to mean "the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance."

To fully understand the rights a coastal State has over its continental shelf and the limits of those rights, it is necessary to set out Articles 77 and 78 of the Convention. Article 77 states that:

Right of the coastal State over the continental shelf:

a. the costal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.
b. The rights referred to in paragraph (1) are exclusive in the sense that if the coastal States does not explore the continental shelf or exploit its natural resources, no one may undertake these activities without the express consent of the coastal State;
c. The rights of the coastal State over the continental shelf do not depend on occupation, effective or national, or on any express proclamation;
d. The natural resources referred to in this part consist of the mineral and other non-living recourses of the sea bed and subsoil together with living organisms which, at the harvestable stage, either are immobile oil or under the sea-bed or are unable to move except in constant physical contact with the seabed or the subsoil.

Article 78 of the Convention states that:

Legal status of the superjacent waters and air space and the rights and freedom of other States:

(1) the rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters or of the air space above those waters,
(2) the exercise of the rights of the coastal State over the continental shelf must no infringe or result in any unjustifiable interference with navigation and other rights and freedom of other States as provided in this Convention.

On the basis of the foregoing provisions, the Supreme Court of Nigeria concluded in that case that: though a coastal state exercises certain sovereign rights over its continental shelf, that does not make the shelf part of her land territory over which she has absolute and exclusive control. The sovereign right over the continental shelf is therefore of a limited kind only.

Case two

Case two is in respect of the requests made to the International Court of Justice by Australia and New Zealand for the indication of provisional measures in the nuclear tests cases to enjoin France from further nuclear testing in the atmosphere, and the orders made by the court on these requests, preserve a certain interest from the standpoint of environmental law.

Among the Australia's claims set out in its application was the following:

The interference with ships and aircrafts on the high seas and in the superjacent airspace, and the pollution of the high seas by radioactive fallout, constitute infringements of the freedom of the high seas.

The claims of New Zealand, which is, fundamentally, the same with that of Australia is also set out in the reports of the court.

The aspect of interest in this case is the ability of Australia and New Zealand to link a question of environmental pollution to the generally recognised and established freedom of the high seas and thereby emphasizing the developed state of environmental law at international level.

Although, the court noted in its order indicating provisional measures that France-had relied in diplomatic negotiations, on a series of

scientific reports "which all concluded that he fall-out from the French tests did not constitute a danger to the health of the Australian population," the court's finding in the nuclear tests cases on the possibility of injury arising from the tests is quite revealing. The finding of court was as follows:

> Whereas for the purpose of the present proceedings it suffices to observe that the information submitted to the courts, ...does not exclude the possibility that damage to Australia might be shown to be caused by the deposit on Australian territory of radio-active fall-out resulting from such tests and to be irreparable; whereas in the light of the foregoing considerations the court is satisfied that it should indicate interim measures of protection in order to preserve the right claimed by Australia in the present litigation in respect of the deposit of radio-active fall-out on the territory.

As can be seen from the going, to base an order for provisional measures indicating measures which were going to be regarded by the respondent state as a grave interference with its sovereignty on the mere possibility of damage by nuclear fall-out shows an extremely creditable sensitiveness by the International Court of Justice to the vital importance of prevention, of this form of environmental damage. That notwithstanding, the court was not prepared in the context of a request for provisional measures to act on the question of pollution of the high seas, and therefore found that "the circumstances of the case do not appear to require the indication of interim measures of protection in respect of other rights claimed by Australia in the application."

Case three

The third case is the judgment of the court in the *Fisheries Jurisdiction cases. Although,* the cases were essentially dealing with a maritime despite, some pertinent observations were made which could be said to have begun to develop some principles of modern environmental law.

The court in the *Fisheries Jurisdiction case*-recognised that the law pertaining to fisheries must accept the primacy for the need of conservation based on scientific data. This aspect has been properly emphasised to the extent needed to establish that the exercise of preferential rights of the coastal State as well as the historic rights of other states dependent on the same fishing grounds, have all to be subject to the overriding consideration of proper conservation of the fishery resources for the benefit of all concerned. This conclusion would appear warranted if this vital source of man's nutrition were to be preserved and developed for the community.

> The reasoning of the court is not far-fetched, for there has always been the need for accepting clearly in maritime matters the existence of the duty to have reasonable regard to the interests of other states. Thus the rights of the coastal States in the coastal fisheries of the adjacent waters have nevertheless to be exercised with due regard to the rights of other states and the claims and counter-claims in this respect have to be resolved on the basis of considerations of equity." It need be emphasised that at the time of this decision, there was no specific conventional law governing this aspect and it was the evolution of customary law, which has punished the basis of the court's judgment in this ease.° This was a distinct contribution of the court in 1974 to the development of environmental law to serve the best interests of the community.

Case four

Another case decided by the International Court of Justice in which environmental considerations, while not the essential point of this dispute, were regarded by both parties of considerable importance was the *Gulf of Maine case* between the United States and Canada[66] One of the contentions put forward by the United States in that case in support of the maritime boundary delimitation line which it contended was a correct one was that the George Bank in the *Gulf of Maine* was a separate and identifiable ecological regime, that the dividing line should permit single state management of the resources of the Bank, that hydrocarbon development on the northeast portion of the Bank would place the marine resources of the entire Bank at risk, and that disputes in connection with fishery management and hydrocarbon development would be minimized by the line placing the whole Bank under the control of a single state. Thus, in its memorial, it observed that:

Because hydrocarbon development on the continental shelf may affect fish that inhabit the ecological regime in which that activity occurs, disputes may arise if regulatory authority over a regime is divided among two or more States. The location of a single maritime boundary will minimize the potential of such disputes if responsibility for the protection of the entire regime is rested in a single State.

The reason for the contention of the United States was that:

> Such a result would allow a State to make choices on continental shelf or other developmental and environmental matters after an assessment of the full range of its interests in the entire area and

without concern that its decisions will effect, or be fed by, the interests of the other States.

With its counter-memorial, the United States annexed a study, amounting to a whole volume of 'Environmental Risks of Hydrocarbon Development on the north-eastern Portion of Georges Bank.' The conclusion of that study was as follows:

In the event oil was discharged into the water column in the course of hydrocarbon development on the north-eastern portion of George Bank, it would be transported in the circulation patter over the Bank before it dissipated. Because the larvae of fish and shellfish are particularly susceptible to damage from oil, and because the north-eastern portion of Georges Bank stocks as a whole would be damaged by a discharge of oil during spawning season on the north-eastern portion, of the Bank, and would continue to harm adult organisms, such as lobster and scallops that live in the seabed. Due to the pattern in which water circulates over Georges Bank and the direction of the prevailing winds, it is highly unlikely that oil discharged into the water column above the north-eastern portion of the Bank either would cross the northeast channel to the Scotian shelf or reach the coasts of the Gulf of Marine area.

The response of Canada to this argument was to repudiate the idea that because single-state management might be desirable, it necessarily followed that this was a legal reason to leave the whole of the Bank to one state. It stated further that:

It must be stressed at the outset that the Unites States argument rests on the quite unjustifiable legal assumption that the whole of Georges Bank appertains to the United States, for it part of the Bank were Canadian it follows that Canada's Georges Bank would face the same environment risk.

Canada, therefore, contended that the argument of the Unites States was circular. It challenged the United States scientific analysis on its own terms in the following words:

The total scientific defect in the Unites States analysis is that it concerns itself only with oil in the water column. The United States ignores the fact that by far the greater bulk of oil released by oil-wells blowouts or by a tanker spills rests on the surface of the water. Only a small fraction is dissolved in the water column. Models of trajectory and oil spill fates demonstrate that owing to wind and current action, the great mass of any oil spill on either the north-eastern or south-western part of Georges Bank will pass to the scotian shelf and to the Canadian coastline. The United States

argument on this point is therefore incomplete and misleading. The chances are that Canada will suffer the effects of an oil spill or oil well blow out anywhere on Georges Bank to a much greater degree than the United states, and official United States studies have recognised this fact.

It could be seen from the foregoing that both parties have indicated that they were seriously concerned about the impact of hydrocarbon development on the natural resources of the area, which would be affected by the delimitation line to be traced by the chamber. The environmentalist who turns to the judgment of the chamber to see what it had to say on this point will however be disappointed. The main thrust of the argument of the chamber was that international law in the field of maritime delimitation does not descent to matters of such detail. According to the Court:

A body of detailed rules is not to be looked for in customary international law which in fact comprises a limited set of norms for ensuring the coexistence and vital co-operation of the members of the international community, together with a set of customary rules whose presence in the opinion juris of States can be tested by induction based on the analysis of a sufficiently extensive and convincing practice, and not by deduction from preconceived ideas. It is therefore unrewarding, especially in a new and still unconsolidated field like that involving the quite recent extension of the claims of States to areas which were until yesterday zones of the high seas, to look at general international law to provide a ready-made sex of rules that can be used for solving any delimitation problems that arise.

On the basis of the foregoing, the International Court of Justice found that each party's reasoning is in fact based on a false' premise since it was an error to search general international law for a set of rules which are not there. The court mentions specifically as an example of this mistake:

> ...the idea advocated by the United States that such a boundary should make it possible to ensure the optimum conservation and management of living resources and at the same time reduce the potential for future disputes between the parties."

The court in its judgment also referred to socio-economic aspects of the dispute to which the parties had devoted considerable argument and stated that:

> However, the crux of the matter lies elsewhere. It should be emphasised. that these fishing aspects, and others relating to activities in the fields of oil exploration, scientific research, or

> common defence arrangements, may require an examination of valid considerations of a political arid economic character. The chamber is however bound by its statute, and required by the parties, not to take a decision *ex aequo et Bono,* but to achieve a result on the basis of law. He chamber is, furthermore, convinced that for the purposes of such a delimitation operation as is here required, international law, does no more than by down in general that equitable criteria are to be applied, criteria which are not spelled out but which are essentially to be determined in relation to what may be properly called the geographical features of the area.

When it came to determine the final settlement of the delimitation line, in the area of the Georges Bank, the court noted that the bank was the real subject of the dispute from the viewpoint of the potential resources of the subsoil and also, in particular, that of fisheries that are of major economic importance. It therefore examined the question of whether circumstances other than the geography of the Gulf of Maine ought in assessing the equitable character of the result produced by this portion of the delimitation line. Thus, after considering arguments related to conservation and management of fisheries, and other maritime activities concerning navigational assistance, resource, research, defence, etc., the court concluded as follows:

> It is, therefore, in the chamber's view, evident that the respective scale of activities connected with fishing — or navigation, defence or, for the matter, petroleum exploration and exploitation — cannot be taken into account as a relevant circumstance or, if the term is preferred, as an equitable criterion to be applied in determining the delimitation line.[75]

As rightly pointed out, from the reasoning of the court, it is clear that what the chamber had in mind was the charge in the fishing practices of the nationals of the two states concerned resulting from the drawing of the delimitation line. It does not appear to have had in contemplation any question of environmental protection and in particular, the ecological impact of hydrocarbon exploration on the fish stocks.

While accepting the reasoning of the court under the first lines of the issues determined, whereby it rejected the idea that current customary international law contains a specific rule in favour of single State management of resources in such a situation as the Gulf of Marine, the same cannot be said to be true under the second lines which deals with environmental considerations. This is because; at the second lines of its argument it did not show more awareness of the possible relevance of environmental

considerations in testing the equitable nature of a contemplated delimitation_

Finally, it may be tempting to hold the view that the court took the view that the arguments of the two parties on the issue of environmental conservation were evenly balanced, that, the impact of oil spilt would be felt by both countries, and that however vital the considerations of environmental protection might be, they did not in the particular circumstances of the case point one way or the other when viewed from the angle of the equitableness of the result. However, if such were the view of the court, it was not expressed in its judgment. That being the case, an opportunity has been missed by the court to underline the importance of environmental considerations at the international level, which may not affect the result necessarily.

3.6 Some international measures for environmental protection

The development of international law regarding environmental protection really began in 1972 with the United Nations Conference on the Human Environment. This Conference has held in response to the ground swell of public awareness about environmental pollution in both developed and developing worlds.

It is a known fact that environmental degradation is no respecter of geographical boundaries. Therefore, environmental problems within the natural or geographical boundaries cannot be adequately protected by individual countries isolated efforts. A general international law principles therefore oblige each nation to take such measures as may be necessary to a practicable extent to ensure that activities within is territory conform to the generally accepted international law standards to the prevention of injury to the environment of another state.

The modern trend for international efforts at ameliorating environmental degradation are express written treaties and agreements which are better than the hoards principles of unwritten international law. These international agreements may be non-binding unilateral declaration of intent to jointly proposed declarations of principles of goal or firm agreement that create specific legal obligation.

There has been a plethora of international instruments dealing with the issues of environmental protection. Prominent amongst these are the Stockholm Declaration of 1972 and the Rio

Declaration of 1992. Each of these Declarations is discussed with the view of extracting the major principles enshrined in them.

Stockholm Declaration on Human Environment 1972

Basically, the international obligations to protect the environment were largely initiated by the Stockholm Declaration on Human Environment in 1972. The Stockholin Declaration, as is popularly called, was made by 113 states. Some of the important environmental principles agreed upon at the Stockholm Declaration are as follows:

Principle 1

Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits life of dignity and well being, and he bears a solemn responsibility to protect and improve the environment for present and future generations. In this respect, policies promoting or perpetuating apartheid, racial segregation, discrimination, colonial and other forms of oppression and foreign domination stand condemned and must be eliminated.

Principle 2

The natural resources of the earth including the air, water, land, flora and fauna and especially representative samples of natural ecosystems must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.

Principle 3

The capacity of the earth to produce vital renewable resources must be maintained and, wherever practicable, restored or improved.

Principle 4

Man has a special responsibility to safeguard and wisely manage the heritage of wildlife and its habitat, which are now gravely imperilled by a combination of adverse factors. Nature conservation including wildlife must therefore receive importance in planning for economic development.

Principle 5

The non-renewable resources of the earth must be employed in such a way as to guard against the danger of their future exhaustion and to ensure that benefits from such employment are shared by all mankind

Principle 6

The discharge of toxic substances or of other substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless, must be halted in order to ensure that serious or in eversible damage is not inflicted upon ecosystems. The just struggle of the peoples of all countries against pollution should be supported

Principle 7

States shall take all possible steps to prevent pollution of the seas by substances that are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

Principle 8

Economic and social development is essential for ensuring a favourable living and for the improvement of the quality of life.

Principle 21

States have, in accordance with the Charter of the United Nations and the principle of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Principle 23

Without prejudice to such criteria as may be agreed upon by the international community, or to standards which will have to be determined nationally, it will be essential in all cases to consider the systems of values prevailing in each country and the extent of the applicability of standards which are valid for the most advanced countries but which may be inappropriate and of unwanted social cost for the developing countries.

Rio Declaration on Environment and Development in 1992

At the twentieth anniversary of the Stockholm Declaration, the United Nations Conference on Environment and Development was held in Rio de Janeiro in June 1992. The Earth Summit 1992 or the Rio Conference, as is sometimes called, witnessed the signing of some vital documents concerning the protection of the environment. Pertinent among these documents are (a) the framework convention on climate change and on biological diversity signed by 153 countries; (b) Agenda 21, which is an Action Plan of the international community in respect of the environment and development for the 21st Century; and (c) the Rio Declaration, a statement of 27 principles on environment and development. These documents reaffirm that protection of the environment requires international co-operation and place environmental issues high on the agenda of the international community. Some of the important principles of the Rio Declaration are as follows:

Principle 1

Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.

Principle 2

States have, in accordance with the Charter of the United Nations and the principleS of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure, that activities within their jurisdiction or control do not cause damage to the,-environment of other States or of arrears beyond the limits of national jurisdiction.

Principle 3

The right to development must be fulfilled so as to equity meet developmental an environmental needs of present and future generations.

Principle 4

In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it.

Principle 5

All States and all people shall cooperate in the essential task of eradicating poverty as an indispensable requirement for sustainable development, in order to decrease the disparities in standards of living and better meet the needs of the majority of the people of the world

Principle 6

The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority. International actions in the field of environment and development should also address the interests and needs of all countries

Principle 7

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the earth's ecosystem. In view of the different contributions to global environmental degradation, states have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.

Principle 8

To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate demographic policies.

Principle 9

States should cooperate to strengthen endogenous capacity-building for sustainable development by improving scientific understanding through exchanges of scientific understanding

through exchanges of scientific and technological knowledge, and by enhancing the development, adaptation, diffusion and transfer of technologies, including new and innovative technologies.

Principle 10

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making process. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Principle 11

State shall enact effective environmental legislation. Environmental standards, management objectives and priorities should reflect the environmental and development context to which they apply. Standards applied by some countries may be inappropriate and of unwarranted economic and social cost of other countries, in particular developing countries.

Principle 12

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development in all countries, to better address the problems of environmental degradation. Trade policy measures for environmental purposes should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade. Unilateral actions to deal with environmental challenges outside the jurisdiction of the importing country should be avoided. Environmental measures addressing Tran boundary or global environmental problems should as far as possible, be based on an international consensus.

Principle 13

States shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage. States shall also cooperate in an expeditious and more determined manner to develop further international law regarding

liability ad compensation for adverse effects of environmental damage caused by activities within their jurisdiction or control to areas beyond their jurisdiction.

Principle 14

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

Principle 22

Indigenous people and their communities, and other local communities, have a vital role in environmental management and development because of their knowledge and traditional practices. States should recognise, duly support their identity, culture and interests, and enable their effective participation in the achievement of sustainable development.

Principle 23

In the environment and natural resources of people under oppression, domination and occupation shall be protected.

Principle 24

Warfare is inherently destructive of sustainable development. States shall therefore respect international law by providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.

3.7 Other International instruments for the protection of environment

In addition to the principles enshrined in the Stockholm Declaration of 1972 and Rio Conference of 1992, there are some other documents or instruments at international level that concerns with the protection of international environment. Few of these documents will be highlighted here.

Geneva Convention on the High Seas, 1958"

Article 25 of this Convention states that:

(1) Every State shall take measures to prevent pollution of the seas from dumping of radioactive waste, taking into account any standards and regulations which may be formulated by the competent international organisations.
(3) All States shall cooperate with the competent international organisations in taking measures for the prevention of pollution of the sea or air space above, resulting from any activities with radioactive materials or other harmful agent."

It need be stated that the treaty did not define what pollution is; it seems reasonable to assume that dumping a radioactive waste is synonymous with pollution of the sea. The obligations of the contracting parties are to take measures to prevent the dumping of hazardous waste. The act of dumping is isolative of the provision as this can only be interpreted to mean that where pollution occurs no preventive measures have been taken. Therefore, the obligation placed on the States is to ensure that ships flying their flags may be punished for the discharge of hazardous waste into . the sea or radioactive pollution of the air above the sea. The basic weakness of the provision is the lack of an enforcement agency.

(i) The United Nation Convention on the Law of the Sea"

By Article 136, the Convention developed a theory that the high seas and their resources constitute the common heritage of mankind. Nature has rested in the entire mankind the property in the resources of the sea and consequent upon that the impairment of the ecology of the sea is the destruction of the joint property of mankind. It is thus stated that:

> Just as all mankind are entitled to the benefits of the resources of the sea
> so also they have a corresponding duty to desist from dumping hazardous waste that would destroy the flora and fauna of the sea (Uchegbu, nd).

The sea has no state to protect it and so its environment is, as it were, a stateless phenomenon. Article 145 of the Convention therefore empowers the authority to adopt appropriate rules of the:

> Prevention, reduction and control of pollution and other hazards to the marine environment, including the coastline, and of interference with the ecological balance of the marine environment, particular

attention being paid to the need for protection from harmful effects of such activities as disposal of waste...

(iii) The Draft Convention on the Control of the Trans-Boundary Movements of Hazardous Wastes 1988"

This is the first ever attempt in the process of international law to evolve a universalist treaty which will change the unsatisfactory rules of customary international law as regards Tran boundary movements of hazardous waste. The dumping at Koko, in the then Bendel State of Italian toxic in 1988 is a good example while this treaty is important. The Nigerian experience also led to the enactment of the Harmful Wastes (Special Criminal Provisions, etc.) Ace' in 1988. The avowed purpose of the Act is the declaration that dumping of toxic waste in Nigeria is a crime.

By section 2 of the Act, a crime is committed when any person, a company or a member of the diplomatic mission in Nigeria without authority:

(a) crimes, deposits, dumps or causes to be carried, deposited or dumped or is in possession for the purpose of carrying, depositing, or dumping any harmful wastes on any land or in any territorial waters or contiguous zone or exclusive economic zone of Nigeria or its internal waters or

(b) transports or causes to be transported or is in possession for the purpose of transporting any harmful waste or

(c) imports or causes to be imported or negotiates for purpose of importing any harmful waste or

(e) Sells, offers for sale, buys or otherwise deals in any harmful waste shall be guilty of a crime under this Act."

The Draft Convention on the control of the trans-boundary movements of hazardous wastes creates a law to govern the trans-boundary movement of wastes between or among parties that have no bilateral or multilateral treaties with other contracting or non-contracting parties. It thus provides in article VIII that:

(1) Every state has the right to refuse any shipment of hazardous wastes into its territory which were generated in the territory of another State.

(2) A contracting party which is an exporting country shall not oppose, hinder, or prevent the return of hazardous wastes into its territory, when an importing or transit country opposes the movement of such hazardous wastes after they have left the territory of the exporting country.

(3) If a Tran boundary movement of hazardous wastes is not or cannot be completed as foreseen, contracting parties shall co-operate to ensure that hazardous wastes are disposed of in an environmentally sound manner.

iv) Convention on International Civil Aviation

This is an old treaty, which provides that

Each contracting State agrees to take effective measures to prevent the spread by means of air navigation of cholera typhus (epidemic), small pox, yellow fever, plague and other communicable diseases as the contracting States shall from time to time decide to designate...[82]

It is seen from the foregoing treaties that the ecosystem is the common heritage of mankind and need not ask for protection before mankind offers it. The attempt by various organs or agencies of the United Nations at protecting the environment at international level is highly commendable and should be encouraged by all states.

4.0 CONCLUSION

Environmental protection is concerned with the preservation and protection of the air, water and land from pollution or degradation and the preservation of the heritage of mankind for the benefit of the present and future generations. The fundamental aims and objective of environmental protection is therefore to ensure that the environment and natural resources provided by nature are used in such a way as to ensure the maximum benefit for not only the present age but also for the future generations.

The quest to achieve a sustainable world environment is fraught with so many problems. The level of illiteracy, sophistication, low level of hygiene consciousness, poverty, etc., are all factors that hamper the development of effective environmental protection measures in the society, especially in the developing world.

In addition, the frontier or throwaway mentality sees the earth as a place of unlimited room and resources, wherever increasing production, consumption, and technology inevitably lead to a better life for everyone. We pollute one area and merely move to another, eliminate, or control the pollution through technology. This mentality represents an attempt to discriminate nature.

Except there is a change from this mentality of throw-away or frontier rules to a new set of sustainable earth or conserver rules desig.ned to

maintain the earth's vital life support systems, it will be practically impossible to sustain our well being and security as human beings. It will also make it difficult for mankind to fulfil it.

5.0 SUMMARY

This unit clearly brought to the fore the importance and the role of International Environmental law in policing the environment so that the world can be a conducive place to live in based on the principle of sustainable development.

6.0 TUTOR MARKED ASSIGNMENT (TMA)

1. Highlight the statements of the World Commission on Environment and development
2. List the elements that are germane to sustainable development.

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The Geneva Convention on Long Range Trans-boundary Air Pollution (1979) Convention for the protection of the Ozone Layer (Vienna).

UNIT 4 COMPARATIVE STUDY OF ENVIRONMENTAL LAWS IN SOME ADVANCED COUNTRIES

CONTENTS

1.0 INTRODUCTION

Environmental law is simply expressed as the body of law that seeks to protect or enhance the environment. In the contemporary times it is virtually nothing new.

Globally, environmental laws apply in many countries and states and grant wide rights (such as for instance the right to a clean and healthy environment). Environmental laws cover a huge variety of issues from the local (e. g noise control) to the global (e. g climate change).

2.0 OBJECTIVES

By the end of this Unit, you should be able to:

- Understand the operations of environmental laws in selected countries.

3.0 MAIN CONTENT

3.1 Environmental Law in the United Kingdom

In the UK, the environment is generally defined to mean air, water and land. The regulatory bodies charged with responsibility for protection of the environment are principally:

- Environment Agency
- Natural Resources Wales
- Scottish Environmental Protection Agency
- Department of the Environment in Northern Ireland

- Local authorities

The kind of problems covered by environmental law in the UK include fly tipping, noisy neighbours, graffiti, litter, dog mess, pollution, planning, wildlife, right of ways. The environmental law information in UK empowers the people to participate in environmental matters in line with the objectives of the Aarhus convention 1998. It also promotes a culture of environmental citizenship by providing information on rights and responsibilities. In the UK, the first systematic attempts to control the polluting effects of the industrial revolution were made by the Alkali Acts in the 19th century. Later legislation addressed pollution of water and land (Deposit of poisonous wastes Act 1972).

It is important to state that some UK environmental laws come from international conventions and Agreements. International Treaties seek to regulate issues as diverse as climate change, International Waster shipments and Public Access to justice, Access to Environmental information and participation in Environmental Decision making.

3.2 Environmental Law in Thailand

The Enhancement and conservation of National Environmental and Quality Act B.E 253 has been considered one of the most comprehensive environmental laws in Thailand. The Act consists of Six main sections: Introduction, Approaches to National Environmental Act, Environmental Protection, Pollution control, Promotion measures and Civil and Penal liability.

According to the Act, the Environmental Quality Board is established. The Environmental Quality Board has powers and duties in submitting policy and governing related agencies in environmental quality management. Examples of powers and duties of the Board are to submit policy and plan: to consider and approve the Environmental Quality Management Plan, Provincial Action Plan for environmental quality management, the action plan for prevention and remedy of danger caused by contaminations of pollutants, the setting of emission of effluent standards and to specify measures for the strengthening and fostering of co-operation and co-ordination among government agencies and private sectors.

In addition, the Board also empowers the following major tasks:

- Prescribing major environmental quality standards that include water quality standards for all freshwater and coastal/estuarine water resource/areas, ground water standard, atmospheric

ambient air standards, ambient standards for noise and vibration as well as environmental quality standards for other matters;

- Issuing ministerial regulation designating watershed areas, unique natural ecosystems and naturally composed fragile ecosystems; and
- Specifying types and sizes of project or activities of any government agencies, state enterprises and/or private person that are likely to have environmental impacts, since these projects and /or activities are required to prepare reports on environmental assessment for submission to seek approval.

Under pollution control section of the Act, the pollution control committee is established with the powers and duties as follows:

- To submit action plan for prevention or remedy of pollution hazards or contamination to the National Environmental Board;
- To give opinion, advise and to recommend to the National Environmental Board and the Minister regarding;
  a) Proposed amendment to or improvement of any control, prevention, reduction, or eradication pollution laws;
  b) Measures about taxation and private investment promotion in relation to pollution control;
  c) Determination of service fee rates for the central waste water treatment or central waste disposal services of the government;
  d) The setting of emission or effluent standards and designating types or sources of pollution required to comply with such standards; and
  e) The issuing of ministerial regulations specifying the types or categories of hazardous wastes.
- To prepare and submit the report on pollution situation to the National Environmental Board every year.

From the foregoing, it could be seen that the kingdom of Thailand takes the issues of environment seriously as portrayed in the environmental law annotated above.

3.3 Environmental Law in the United State of America

United States environmental law concerns legal standards to protect human health and improve the natural environment of the United States. Inspite of its being criticized at home and abroad on issues of protection, enforcement and over-regulation, the country remains an important source of environmental legal expertise and experience. The United States congress has enacted Federal statutes intended to address pollution control and remediation, including for example the Clean Air

Act (air pollution), the Clean Water Act (water pollution) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) (Contaminated site cleanup). There are also Federal laws governing natural resources use and biodiversity which are strongly influenced by environmental principles, including the Endangered species Act, National Forest Management Act and Coastal zone Management Act. The National Environmental Policy Act, governing environmental impact review in actions undertaken or approved by the U.S Federal government may implicate all of these areas.

Federalism in the United States has played a role in the shape of national environmental legislation. Many Federal environmental laws employ co-operative federalism mechanisms – Many Federal regulatory programmes are administered in coordination with the US States. Furthermore, the States generally have enacted their own laws to cover areas not pre-empted by federal law. This includes areas where congress had acted in limited fashion (e. g State site cleanup laws to handle sites outside superfund) and where congress has left regulation primarily to the States (e. g water resources law).

The history of environmental law in the U.S can be traced back to early roots in common law doctrines, for example, the law of nuisance and the public trust doctrine. The first environmental statute was the Rivers and Harbors Act of 1899, which has been largely superseded by the Clean Water Act (CWA). However, most current major environmental statues, such as the Federal statutes listed above, were passed in the time spanning the late 1960s through the early 1980s. Prior to the passage of these statutes, most federal environmental laws were not nearly as comprehensive.

Silent spring, a 1962 book by Rachel Carson, is frequently credited as launching the environmental movement in the United States. The book documented the effects of pesticides, especially DDT, on birds and other wildlife.

One law suit that has been widely recognized as one of the earliest environmental cases is Scenic Hudson Preservation Conference V. Federal Power Commission, decided in 1965 by the Second Circuit Court of Appeals, prior to the passage of the major federal environmental statutes. The case helped halt the construction of a power plant on storm King Mountain in New York State. The case has been described as giving birth to environmental litigation and helping create the legal doctrine of standing to bring environmental claims. The Scenic Hudson case also is said to have helped inspire the passage of

the National Environmental Policy Act (NEPA) and the creation of such advocacy groups as the Natural Resources Defence Council.
Law from every stratum of the laws of the United State pertain to environmental issues. Congress has passed a number of landmark environmental regulatory regimes, but many other federal laws are equally important, if less comprehensive. Concurrently, the legislatures of the fifty states have passed innumerable comparable sets of laws. These States and Federal systems are foliated with layer upon layer of administrative regulation. Meanwhile, the U.S judicial system reviews not only the legislative enactments, but also the administrative decisions of the many agencies dealing with environmental issues. Where the statutes and regulations end, the common law begins.

Education and training being a tool of policy instrument is largely deployed in environmental law development. For instance, environmental law courses are offered as elective courses in the second and third years of Doctor of jurisprudence (JD) at many American law schools. Curricular vary, an introductory course might focus on the "big five" federal statutes – NEPA, Clean Air Act, CWA, CERCLA (Superfund) and Resource Conservation and Recovery Act (or alternatively, the Federal Insecticide, Fungicide, and Rodenticide Act) – and may be offered in conjunction with a natural resources law course. Smaller seminars may be offered on more focused topics. Some U.S law schools also offer an LLM or JSD specialization in environmental law. Additionally, several law schools host legal clinics that focus on environmental law, providing students with an opportunity to learn about environmental law in the context of real world disputes involving actual clients.

4.0 CONCLUSION

A comparative study of environmental laws in the United Kingdom, Kingdom of Thailand and the United States of America is highlighted. The three countries have what it takes in terms of statutes, conventions and laws to safeguard the environment from wanton destruction. However, the US has gone a step ahead to harness training in Environmental education.

5.0 SUMMARY

The three countries have legal enactments in place to protect the environment and to fast track sustainable development.

6.0 TUTOR MARKED ASSESSMENT (TMA)

1. What is environmental law?
2. List the regulatory bodies in the UK responsible for the protection of the environment.
3. Highlight the six (6) sections of the Enhancement and conservation of National Environment and Quality Act of Thailand
4. Enumerate the “big five” Federal statutes in the United States of America.

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