



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**SCHOOL OF LAW**

**COURSE CODE: LAW 321**

**COURSE TITLE: ENVIRONMENTAL LAW I**

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# MODULE 1

## UNIT 1

### CONCEPT OF ENVIRONMENTAL LAW

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#### 1.0 Introduction

In this unit, students/readers will be introduced to the basic concept of Environmental law.

Governmental participation by all tiers is inevitable if measures designed to protect the environment is to be effective. At this juncture, law has a key role to play regardless of technological or scientific design or devices. The main objective of preservation, conservation and maintenance of purify environment can only be achieved only if the law can be mobilized to operate in partnership with science and technology.

#### 2.0 Objectives

At the end of this Unit, students and readers alike should be able to know:

- (i) The meaning of Concept of Environmental Law in Nigeria
- (ii) Its dynamism and
- (iii) Development in the recent years.

#### 3.0 Main Topic

##### 3.1 The Concept of Environmental Law

Environmental Law, no doubt, as a course, is the youngest course of study in any of the Nigerian Law Faculty's Curriculum in any tertiary institutions, either Colleges, Universities, or/College or University of Technology. The issue of environmental law world over cannot be discussed in isolation of the key concept known as Environment. This word is the main core of this study and law comes in as an inevitable

concomitant to protect the environment by way of regulating and regularizing it against mis-use and abuse by the human elements (who are the anchors and beneficiaries of environment).

Hitherto, the term 'concept' means 'the idea underlying a class of things or the general notion of that thing in discussing the concept of environmental law, therefore, it supply means the general ideas/principles, rules and regulations, policies and programmes, the legal basis that lent credence to the need and eventual development of what we known today as Environmental Law. The essence of this course was described by one of the prominent legal luminaries at the Bar and Bench in well lucid way since its advent. It is no any other person than Honourable Justice Belgore JSc. Where he was expressing his joy in a seminar on environmental law posited as follows:

“This gathering will discuss the problem of the survival of this earth in relation to man made destructive things, nay, you are going to discuss the whole legal ramification of the environment in Nigeria, but you may discover you are thinking of life on the earth most of the time”

In a similar vein, a former member of International Court of Justice (I.C.J), Honourable Prince Bola Ajibola corroborated the afore said opinion, 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 generations of Nigerians”

The concept of environmental issue has taken a serious dimension worldwide and Nigeria is not excepted in the new horizon of not mere control, protection and management of environmental health problems but with legal policing. “The reason for this rapid paradigm shift in Nigeria in recent years may not be divorced from the dumping of harmful toxic waste materials in Koko in the Delta State (formerly part of Bendel State) in June, 1988 and the need to redefine our hitherto concept of the environment”.

Although in 1970, the environment was described as ‘the issue of the year internationally’ with this assertion, Nigerian national government was not gingered into action until the event of widely published Koko saga in 1988 tagged “Koko Toxic Waste Dump”. As if this was the only impetus awaited by the Nigerian government to spark off her action. Since 1988 national focus on the Nigerian environment and environmental programmes and policies cannot be over-emphasized. This fact was supported by late Chief F.R.A Williams (SAN) when he stated that “prior to 1988, legal and administrative measures covered mainly protective and preventive measures

relating to environmental sanitation and issue on public health; warning and emergency measures to reduce potential harm in case of natural disasters and context of Nigeria Law which whilst paying due regard to global movements and ideas as well as the increasing interest of the international community on the problems pertaining to the environment”.

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

To this extent, thanks to the “Koko Toxic Waste Dump” which allowed Nigerian to have a nationally unified law/national policies and programme on the Environment which eventually led to the promulgation of the two basic Decrees i.e *The Harmful Waste Special Criminal Provision Decree 1988, No 42; the Federal Environmental Protection Agency (FEPA) Decree, 1988 No. 58 and the Environmental Impact Assessment (EIA) Decree No 86* (hereinafter cited as EIA Act) 1992. With these laws on ground, we cannot expressly say that Nigeria have no national law guiding her environment. At least for the first time in the history of this country. She can equally boast of a regulatory provision and the agency to administer the regulations. It is not however how far but how well vis-à-vis the statutes. It is the rule that expressly pave way for the significance study of the laws related to environment. It therefore ushered in the study of environmentally related laws in the Nigerian colleges and universities as it is today.

Furthermore, the environmental problems on the other hand has no exclusive terrain, but rather a universal global problems. 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. In that wise, the universal environmental problem cannot be solved by individual nation but has to be done collectively through local, national and international environmental laws and various bodies established for the purpose. “They are part of worldwide evolutionary process reflecting current trends from several countries “peaking” at the platform of a pervasive international environmental legal regime with the capacity of significant

transboundary impacts on the growth of national environmental law worldwide” (Okorodudu Fabara 1998: IX).

#### **4.0 Conclusion**

In conclusion, you have learnt within this short period the concept of environmental law in Nigeria and the enabling statutes for further protection, development and sustainability of our environment.

#### **5.0 Summary**

Under this unit, you have learnt the concept of environmental law, the views of some legal luminaries, the evolvement of the course into the Nigeria’s Faculty of law curriculum lately.

The Koko saga which serves as impetus and catalyst to the Federal Government of Nigeria to make a comprehensive national policy and statutes on the environmental abuse and equally led to the promulgation/enactment of 3 remarkable Decrees on the series to combat the toxic waste and other pollutions were highly remarkable, historical and major landmark in the history of policy formulation on environmental issues since 1960.

#### **6.0 Tutor Marked Assignment (TMA)**

- i. Define that term ‘concept’
- ii. Give view of some legal luminaries expressed in support of the concept of environmental law.
- iii a. State the statutes enacted to promote/sustaining our environment  
b. Do these Decrees have any relevance to the development or growth of environment law in Nigeria?

#### **7.0 References**

- i. Hornby, 1984, Oxford Advanced Learner’s Dictionary, 4<sup>th</sup> Edition.
- ii. Lawrence Atsegbua et al 2003: *Environmental Law in Nigeria: Theory and Practice*. Ababa Press Ltd, Lagos.
- iii. Ola, C. S, 1984, *Town and Country Planning a Law in Nigeria*, OUP, Jericho, Ibadan
- iv. Okorodudu – Fubara M. T. 1998: *Law of Environmental Protection: Materials and Text*, Caltap Publication (Nigeria) Limited, Ibadan, Nigeria.
- v. Andrew Waite: 2001: *Environmental Law in Property Transaction*, Butterworth’s, London.

## UNIT 2

### THE CONCEPT OF ENVIRONMENT AND THE ENVIRONMENTAL LAW

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#### 1.0 Introduction

In the Unit 1 of this course, you were introduced to the term concept. It was thoroughly defined in relation to the subject matter. Under this unit, we shall discuss the concept of environment from the perspective of legal authors and non legal writers. Also the unit clarified the relationship between the two key concepts i.e the Environment and the law.

#### 2.0 Objectives

At the end of Unit 2 discussion;

- i. The students should be able to define Environment and environmental law.
- ii. Differentiate between the Environment and the law.

#### 3.0 Main Content

##### 3.1 The Concept of Environment

##### What is Environment?

Environment is defined under the Environmental Protection Act 1990 (uk) as consisting of all or any of the following media namely, the air, water and land, and the medium of air includes the air within buildings and the air within other natural or manmade structures above and below ground (Osborn, 1993:131). From ecology angle, environment is the sum of conditions affecting a particular organisms, including physical surroundings, climate and influences of other living organisms (Hutchinson, 1992: 362). Generally speaking, the environment from the above definitions is seen from nature, that is, the living world, including plants, animals, fungi and all landscape, such as mountainous and rivers. It is imperative to define the concept of environment before defining the concept of environment for protection, development and sustainability can not be discussed in isolation.

Be that as it may, what is environmental Law?

### **3.1. The Concept of Environmental Law**

#### **What is Environmental Law? (Meaning of Environmental Law)**

It is a worthwhile exercise to define the basic concept of environmental law. Although, it is difficult to agreed on a unifying or universally acceptable definition. Attempt therefore has to be made to define the concept of Environmental law from various views of Environmental law lawyers and authors; the formular for defining the environmental law depends largely on individual environmentalist who is saddled with responsibility of defining the subject matter. “At one extreme, it can mean pollution control law, at the other, Einstein would say that it is the law which belong to everything that is not one. For most people an acceptable compromise has to be found between these positions” (Andrew Waite et al 2001). Another attempt may mean ‘the law relating to the protection of public health and our natural and man made surroundings. The Environment is where we all live in and the law is what we live in and by’

Dworkin (1987:vii) wrote; we live in and by the law. It makes us what we are, citizens and employees and doctors and spouses and people who own things. It is a sword, shield and menace we insist on our wage or refuge to pay our rent or are forced to forfeit penalties, or are closed up in jail, all in the name of what our abstract and ethereal sovereign, the law has decreed. We are subjects of laws empire, Longman to its methods and ideals, bend in spirit, while we debate what we must therefore do” We may probably conclude from the above that humanity is placed under two sovereigns. The first sovereign is the physical sovereign, the environment, the other is one abstract sovereign which is the law. (Akintayo J. O., 2006: 391). He posited further that it is easier to describe law than to define it. Most of the attempt by legal writers, law commentators even the jurisprudential definitions could not met universal acceptability.

Elias (1956, 37-8) described it as the law of a given community as the body of rules regulating human conduct regarded as obligatory or binding by its members. This description by Elias is still not universal and can only applied to specific area of the law. BurnerHall (1995:viii) perspective, environmental law is seen as the body of laws concerned with the protection of living things (human beings inclusive) from the harm that human activity may immediately or eventually cause to them or their species, either directly or to the media and the habits on which they depend. Environmental law covers the whole universe including not only human beings but also plants, animals, forests shrubs, refuse, bacteria/diseases and insects (Ola C. S 1984:150-154). Like other laws, he said further, it is a system of rules of social control aimed at



achieving certain goals relating to the environment and the universe and securing obedience to them. Rodgers stated that environmental law cannot repeal the rain and the wind nor can it repeal the law of ecology. What it can do is to attempt to create order out of chaos as law cannot after the environment. In the views of Thoron and Beckwith (1997:2), it is the body of the laws to which the label environmental has been attached is concerned with protecting the natural resources of land, air and water, the three environmental media and the flora and fauna which inhabit them.

However, the serialized definitions and descriptions of Environmental Law above are preferable to that offered by MC Eldowney and MC Eldowney (1996: 3). This definition failed to take cognizance of salient point mentioned by Ball and Bell (1994: 95) which says Environmental Law is not about all these laws which relates to the environment, since that ... could cover virtually anything but these laws and practices that have as their object or effect the protection of the environment. All these contributions by the environmentalists and various freelance authors are remarkable development towards making Environmental Law meaningful to both readers , students, researchers and the interested members of society.

#### **4.0 Conclusion**

Students must have learnt the basic concept of environmental law and the concept of environment as well. The various descriptions and definitions of the concept were no doubt landmarks in the study of environmental Law by the legal authors and the environmentalists.

#### **5.0 Summary**

From the above definitions and descriptions, one fact is glaring, that, the environment and environmental law is the total summation of human surroundings including both living and none living objects, while law is an inevitable aspects of environment which provide protection against the abuse of the environment and equally facilitates or hindered development of it.

#### **6.0 Tutor Marked Assignments (TMA)**

- i. Briefly discuss the concept of environment.
- ii. “Environment is the totality of human existence/life” Do you agree?
- iii. Discuss the concept of environmental law in line with the view of environmentalists.

**7.0 References**

- i. Akintayo J.O.A., 2006: Legal and Regulatory to Enhance the Nigeria Environment (Contribution) in Sustainable Environmental Management in Nigeria. Edited book by Math F. A. Ivbijaro.
- ii. Burner Hall (1995): *Environmental Law*, London, Maxwell
- iii. Dworkin Ronald (1987) Law's Empire, The Belkwp Press of Harvard University, Manchester.
- iv. Elias T. O. (1956): The Nature of African Customary Law, University Press, Manchester.
- v. MC Eldowney et al (1996): Environment and the Law Essex, Longman.
- vi. Ola C. S. (1984): *Town and Country Planning And Environmental Law in Nigeria*, OUP, Jericho, Ibadan.

### UNIT 3

- i. **RELATIONSHIP BETWEEN LAW AND ENVIRONMENT**
- ii. **SIGNIFICANCE OF ENVIRONMENTAL LAW**

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#### **1.0 Introduction**

It is necessary to discuss the relationship between the law and the environment. As we have discussed in the previous Units 1 & 2, that, environment is the totality of our surroundings and all the elements therein both living and non-living things for the benefit of the human beings. The presence of law cannot be wished away because the environment need to be protected from destruction and preventing mis-use of the environment.

Environmental law is an instrument for the development and sustainability of our environment. Environmental law is significant in these areas of preventing pollution in both land, air and water and providing remedies and pursuant to the perpetrators of environmental degradations.

#### **2.0 Objectives**

At the end of this lecture, you should be able to know the following:

- i. The actual relationship between Law and Environment.
- ii. Why environmental Law? That is the significance of the Concept of Environmental Law

#### **3.0 Main Content**

**3.1 Relationship between Law and Environment:** It is pertinent at this juncture to know the actual relationship between the law and the environment. One cannot adequately marshal this issue without looking into the various functions of law in our Society. However, the major functions of law is to regulate and regularizes human behaviour in any society (Elias T. O.). As such law is not the only instrument of

regulating social control in our society, as there are other numerous means of checking or curbing human excesses, such as public opinion, ombudsman, custom, religion, arbitration and professional associations.

In that wise, Akintayo J. O. posited that “Law is unique, especially within the confines of our discussion here because its prescriptions are backed with sanctions”. He said further that law is an instrument of social control which help to maintain public order and suppress deviant behaviour and equally facilitates co-operative actions. It constitutes and regulates the principal organs of power and it communicates, regulates and reinforces social values. (Farrar and Digdale, 1990; 4 – 7).

The aspect of functions enumerated above relating to the concept of environmental protection which is limited to the scope of this discussion. As a result, the major function of law is to regulate and regularizes human conduct/behaviour in order to sustain lives within the purview of the environment. In other words, when the constitution of any country emphasizes Right to Life.

It is most valuable of all fundamental rights. It is no gainsaying that “Right to life is given special consideration of all rights and pre requisite to the enjoyment of every other fundamental right at both domestic and international arena.

Moreover, the general condition mandating Law as the best instrument of maintaining and sustaining the environment is a kind of duty addressed to all human beings, natural inhabitants and human organizations/institutions/associations as environmental problems by themselves can never obeyed legal directives or/commands. Inability to obey these laid down rules and regulations tend to diminishes the value of life of both animal and plants and this is tantamount to flouting and violation on the part of human beings of the concept of fundamental right to life. It is advisable that not all environmental problems are human beings caused/or generated, some of these environmental problems are caused by factors far outside the immediate control of human beings. The key function of law here is to drastically reduce and ameliorate the impact by adopting measure that will stop further disturbance and destruction of the ecosystems that may occur as a result of human activities either knowingly or by omission. Law impact techniques into the environment which lead to its development and sustainability. These strategies for sustaining environment includes penal techniques, the administrative regulatory technique and the grievance remedial technique. All activities of law are majorly directed towards achieving peace, safety and its regulatory measures to sustain the society continuity.

It has been acknowledged that a massive pollution of the environment through despoliation of land, air and water by industrial waste, chemical, oil, the dumping of garbage, the indiscriminate use of pesticides and by other means threatens the very conditioning of social survival (Friedman 1972: 199-200).

To this extent, for social survival to be sustained, the society need efficacy of law. And with increases in our population year in year out, the sustenance of the Environment becomes a matter of increasing concern to all and sundry within the purview of law. This analysis of the relevant of law to our environment leads us to the significant of Environmental Law.

### **3.2. Significance of Environmental Law**

The word 'environment' is very important to this research study and for long become very fashionable (says the environmentalist). The need to maintain the environment has made the law of nuisance plays the role of protecting owners of properties against the worst local environmental problems since the advent of the organs of the Cananian Law in the twelfth/12<sup>th</sup> century. At this period, the crown tried to check and control the menace of air pollution in London by limiting imports of 'sea coal'. At one time in the 16<sup>th</sup> century, Shakespeare's father was prosecuted for allowing a dung heap to collect outside his house.

In the present dispensation, the jurisdiction of environmental law is such wider from street corner in the land to the atmosphere. For instance, a former Environment Secretary – Christopher Pattern, stated when introducing the government's Environmental strategy in 1990 "This common inheritance" Environmental Law in the modern day has become highly internalized. Most of the international conventions, conferences, agreements and treaties including policies, programmes and guidelines on codes of practice and an ever growing mountain of literature on subject matter shall be discussed in the subsequent MODULES and Units of this lecture material.

### **Self Assessment**

- i. Discuss the relevant of law to your own environment.

### **4.0 Conclusion**

In this Unit, you studied the relationship between the Law and the Environment and the various views of some Environmentalists, equally learnt the significance of environmental law to our environment. You will know that our environment is "common inheritance" as rightly emphasized.

## 5.0 Summary

In this lecture we have succeeded in examining the main relationship between the law and the concept of environment. In a similar vein, the significance of the environmental law has equally been discussed in this unit.

## 6.0 Tutor Marked Assignment (TMA)

- i. Do environmental law have any significance?
- ii. State and discuss the relationship between the Law and Environment

## 7.0 Reference Books

- i. Friedman W (1972) *Law in a changing Society* 2<sup>nd</sup> Ed. London, Stevens
2. Elias T. O. (1956)
3. Farar and Dugbale (1990)
4. Dliarmandra S. Sengar (2007): *Environmental Law Practices* Hall New Delhi, India
5. Andrew Waite and Tin Jawell (2001): *Environmental Law in Property Transactions* 2<sup>nd</sup> ed. Butterworths, London.

## UNIT 4

### HISTORICAL BACKGROUND TO ENVIRONMENTAL LAW

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#### 1.0 Introduction

This is another remarkable aspect of this lecture. The discussion will be centered on the historical background to Environmental Law in Nigeria and other jurisdictions in the world. It is very important to know how the law for sustaining our surroundings evolved in both the international and at domestic levels; the role of the United Nation Organization, the impact of the regional organizations and the embracement of the decision of international conferences on environmental protections or/sustainability of our natural environment through the efficacy of the law. This unit will equally deal with the sources and scope of Nigerian environmental law. It is note worthy that environmental law metamorphosed from the marriage between Law and environment. In that wise the sources and scope of environmental law in each legal system varies from one jurisdiction to another.

#### 2.0 Objectives

At the end of this lecture students should be able to properly imbibe:

- i. Historical perspective of environmental law
- ii. The role of UNO and its organs vis-à-vis sustainability of the world environment.
- iii. The scope and sources of environmental in Nigeria and other jurisdictions.
- iv. The impact of regional institutions.

#### 3.0 Main Contents

- 3.1 Historical Backgrounds to Environmental Law

*"Our environment is faced with the twin pressure of population and development, results in its deterioration and depletion of the natural resources at an alarmingly fast rate. Besides the traditional pollutants, the strain of unchecked effluents and emissions from hazardous industries has caused pollution of the environment and consequent human health hazards. The reckless industrial growth may lead to an over exploitation and destruction of natural resources to such an extent that our future generations may discover that life support system has been damaged beyond repair. Therefore, there is a need for striking a balance between environment and development so that we may have sustainable development" Dharmendra S. Sengar (2007 : x 1). He added further that "Environmental pollution which has become a worldwide problem, is receiving considerable attention today. The United Nations Conference on Human Environment in 1972 was an initial major effort to diagnose the unsatisfactory state of global environment. In India (for instance) the commitment to this international effort has given births to environmental movement and protection of environment received constitutional status in 1974"*

However, from the view of the environmentalist expressed here, it shows very clearly that environmental issue has recently been given universal attention. Not until 1972, no serious effort have been directed towards making a concrete unique rules and regulations to combat menace of various pollutant elements in the world environment. Most of the nations of the world, despite various threat posed by the environmental hazards, there was no national policy or national statutes directed or enacted to forestall or curb the menace. A big kudos to the Stockholm Declaration on the Human Environment at the Conference of 1972 on the problems of human environment which for the first time in the history of the world, present a blue print on a legal regime for environmental protection, which highlights the problems and suggests measures to make the system of regulatory environmental management more effective and proactive.

Environmental law is comparatively undeveloped in Nigeria for a very long period. Specifically, 'there was' no national environmental law or policy so to speak in Nigeria which protects the individual's rights from encroachment from the activities of others resulting in infectious and paralytic diseases and in the degradation of the quality of our environment. With its attendant adverse effects on the ecological base of Nigeria's natural resources; the economy of the nation and the health of the people" (Ola C. S. 1984 ix).



This was the situation until 1988, when Koko Toxic wastes in the then Bendel State (now Delta) gingered the Federal Government in Nigeria into action towards promulgating environmental law and enforcement of international declaration on environmental laws.

Moreover, abject poverty that has pervaded every nooks and crannies of African continent and its corollary elements such as under development, industrial development of the country, desert encroachment, soil erosion, oil spillages/or pollution and waste mismanagement are the major causes of poor environment. Although, Africa is not the only continent in the world that is affected by these multivarious environmental problems, it is a global problem which the Stockholm Declaration on the Human Environment held by the United Nations Organization on the problems of Human Environment 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 16<sup>th</sup> session of the Commission and 7<sup>th</sup> meeting of the conference of the Ministers which took place in Freetown in April 1981 by its Resolution 412 (xvi)

### **Why the Resolution?**

The resolution immediately call for the incorporation of environmental policies into development planning for the various sectors of the national economy. As a result, a bill entitled "Federal Environmental Protection Agencies (FEPA) Bill 1981 was submitted by the Federal Government to the National Assembly as an Executive Bill. Subsequently, the Nigerian National Assembly supported the need for a national environmental law by resolution adopted by the Antiparliamentary Union on the Environment at the 69<sup>th</sup> Conference in Lagos in April 1982, in support of the ripeness of the Nigeria for enactment, Ola C. S. opined that 'enactment of legislation for the protection of our environment for pollution control and abatement is thereby imperative, for under Article 30(1) of 1979 Constitution of Federal Republic of Nigeria (CFRN) "Every person has a right to life" similarly, cap 2, Section 21 of CFRN 1999 mentioned environmental issue. The inclusion in the subsequent constitution of the environmental concept is in compliance with Article 207 sections 1 and 2 of the SeasTreaty 1982 which Nigeria signed along with 60 other nations which states that:

- (i) States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipeline and outfall structures taking into account internationally agreed rules, standards and recommend practices and procedures.
- (ii) States shall take other measures as may be necessary to prevent, reduce and control pollution of the marine environment from land-based sources (U.N.O. Document No. A/Conference 62/L78 of 28<sup>th</sup> August 1981).

All these rules, regulations and resolutions are most necessary to check the menace of the uncontrollable industrial growth result of Industrial Revolution which may no doubt lead to what Professor Dharmendra S. Sengar described as an over exploitation and destruction of natural resources to such an extent that our future generations may discover that life support system has been damaged beyond repair. With this fact, there is need to maintain equilibrium between the environment and emerging development in order to attain a sustainable development.

However, at this junction, there is need to emphasized further that, environmental pollution is a hazardous agent affecting all nooks and crannies of the entire world and has attracted the attention of both local sub-regional and international organizations particularly the United Nation Organization (UNO). In 1972, the first effort towards making a frantic effort to reduce the unsatisfactory state of global environment was made. The United States of America is not exempted from this exploits to sustain her environment.

As a result, the Indian Government has received this innovation as initiated by the UNO and in 1974 received constitutional attention. Nearly all the countries all over the world most especially those ones who are signatories to the UNO policies and programmes to evolve a 'system of regulatory environmental management more effectively and proactive were taking steps simultaneously.

### **Self Assessment Exercise**

- i. Trace the era of universal attention to the menace of Environmental problems?

### **3.2 Pre –Colonial Era**

Prior to the advent of colonial era in Africa in the 18<sup>th</sup> Century to be precise, Africans have their own traditional (informal) method of protecting and beautifying or ornamentalising their environment. Although this process was conducted and administered by the community as a whole. It was community based sanitation system/method directed towards sustaining their traditional environment. But once the goal of environmental cleaning is achieved, the modus operandi for achieving such is

now in question for the purpose of impacting knowledge. Our fore fathers were very conscious of their environment. And as a result formulated mutual rules, regulations, customs, norms, ethics and cultural aestheticism to manage their immediate environment. These ways and means of tidying and avert pollution in their surroundings in the period under study cut across hamlets, villages, towns and cities which formed communities.

The days of environmental sanitation were fixed and must be observed by all members of the community. The days depends on the agreed time frame. There was no community without a well arranged plot of land where refuse were dumped and consumed at intervals of time. It could be weekly, fortnightly and at times monthly. It was managed through collective efforts. As it was then, so it is nowadays in some rural communities where they still practice this kind of community oriented environmental sanitation and keep pollution at bay.

However, from the researcher's study, many countries in Africa particularly highly rural environment which Nigeria harbours still follows their ancient/tradition methods of keeping their surrounding clean. These villages usually have central refuse dumping ground called "Gidan kasa" in the North, "Ori akitan" in the West and in the East which means the place of dumping refuse The cleaning exercise was usually done by the youth group in the communities, under an elder who was in charge of such affairs.

Although, in those days, it was community based but they have ways of maintaining compliance among themselves. Whoever flouts or breaks the rules were usually punished in form of sanction or banishment from the community for a period of time, could be inform of fine, the offender could be asked to sweep the town hall where one was in existence for certain period of time. this is just to serve as deterrent.

At times, there were 'do and don'ts' towards maintaining sanitized environment, farmers may be banned from bringing into the town or village 'maize silk' from the farm. All these lighter measures keeps traditional societies moving in the era under study.

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 be on the increase, the pressure on the land, water and air space are too many no vehicle to emit into the atmosphere. 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 (Dharmendra S. S 2007: 1-4)

### **Self Assessment Exercise**

- (i) “In the traditional settings, environment sustainability took collective efforts”  
Discuss

### **3.3 Colonial Era**

The areas now known as Nigeria today was not new in interaction with the white men especially the coastal areas and some parts of interland before 1861 when these areas were ceded by the British Government who forced the King Docemu (Dosumu) of Lagos to signed off his territory. In terms of environmental policy and programme during colonial era no spectacular policy. 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 forms of environmental pollution. This concept was addressed by a learned writer that laws which would have in any way restricted economic activities or imposed additional responsibilities on colonial government by way of environmental requirements would probably have been considered counter – productive if not repugnant, thus resulting in a situation where there was hardly any laws deliberately directed at protecting the environment or the natives from the polluting effects of their activities” (Nnadosie K. C. 1994:2). With this assertion, the main essence of these officers were not to improve the settlement of African natives but instead to promote their aesthetic driven by economic interest for fueling their purse with African resources.

However, it may be observed that during colonial times as in the immediate post independence era in Nigeria, the perceived environmental problems actually beginning for some forms 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: 1 – 6).

It is no gainsaying that colonial economic exploitative interests apparently initiated against sustainable development option of the colonized people. This was an unfortunate situation, Roads, dams, drainages and companies established during the colonial era were not done for the benefit of our people (Africans) but nevertheless for

the comforts of the officials themselves and their various home governments. During this period under study, there was no national environmental regulation assert from the sanitary officers who were available in the urban areas and sub-urban but not in the rural areas.

### **3.4. COMMUNITY METHODS/MEANS OF REFUSE DISPOSAL IN VILLAGES, TOWNS AND CITIES**

The people who live in village have a lot of land, so they throw away their refuse into bush and allow to rot away or decay.

Towns and Cities: House in towns and cities are closely built. Refuse are removed from homes, streets and offices. The method used for disposal are:

1. Using bin
2. Government metal disposal container or cylindrical drum
3. Land filling

Providing waste collector in strategic location access for the community.

1. **Bin:** Many houses, offices have bin where all dry waste or refuse is placed and after the bin is full or partially full the bin is carried to larger or central metal but bin for community for forward disposal which is the collector of garbage.
2. **Metal Disposal Drum:** Government: Government provides a big disposal drum where all the people living within the community deposit their solid waste and government put in place environmental disposal unit, which has a lot of disposal vans. These van carry the waste away.
3. **Land Fill:** Refuse are collected in some areas where they have a lot of swamp (soft wet land) refuse is dumped in this area to fill up the land.
4. **Burning of Refuse:** In some areas refuse are deposited in a particular place and they are eventually burnt in incinerator.
5. **Utilizing Refuse:** Refuse can be transformed into manure or compost. Compost is made up materials that can get rotten for example grass, leaves, parts of a plant, dead animal and kitchen refuse etc, they are mixed or mixed or return over regularly and put this waste material with some soil and place in a pit alone to get rotten. When rotten , it can be used as fertilizer.

#### 4.0 Conclusion

In this unit, you studied the origin of the concept, before colonialism and colonial era. The Colonial era witnessed formal policies and programmes centered on economic exploitation and little or no attention were paid to the direction of making ordinance for the Environment. Although, there were sanitary inspectors here and there in the town centres and sub urban area.

#### 5.0 Summary

In this lecture, we have discussed the historical background of Environmental law, the pre colonial era and looked into the colonial era. There was no formal rules during the native administration but it was glaring that people observed norms, customs, ethics and maintained cultural values of their societies. There were few formal rules and regulations during the colonial era up to the independence period but no national environmental law in Nigeria. The lecture continues with post independence era.

#### 6.0 Tutor Marked Assignment (TMA)

- Compare and contrast the two era discussed in this lecture series.

#### 7.0 References/ Further Readings

1. Dharmendra S. Sengar (2007): *Environmental Law, Prentice – Hall*, New Delhi, India
2. Nnadozie K. C. (1994) in a paper presented titled *Pollution Control in Nigeria: The Legal Frame Work* at a workshop in Lagos, Sheraton and Towers Hotels; April.
3. Lawrence Atsegbua et al: 2004, *Environmental law in Nigeria, Theory and Practice* Ababa Press Ltd, Surulere, Lagos.
4. Okorodud Fubara (1998)
5. Ola C. S. (1984)
6. Matt E. A, Ivbijaro et al (2006): *Sustainable Environmental Management in Nigeria*, Maltiri Production, Ibadan.
7. The Constitution of Federal Republic of Nigeria 1979
8. The Constitution of Federal Republic of Nigeria 1999

## UNIT 5

### HISTORICAL BACKGROUND TO ENVIRONMENTAL LAW CONTINUE

#### Table of Contents

- 1.0 Introduction
- 2.0 Objectives
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- 5.0 Summary
- 6.0 Tutor-Marked Assignment
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#### 1.0 Introduction

The pre –colonial and colonial era had been dealt with in the last unit, the discussion continues on the post –independent till date. Here, the efforts of Nigerian Government to cut a niche for herself in the area of preventing and sustaining her environment since attaining independence from the joke of imperialism through instrumentality of enabling statutes till date. Most essentially, the consequences of the impact of industrialization on the environmental policy in Nigeria, a new concept of environmental law had to be articulated (Lawrence Atsegbua et al 2003:5). The impact of the laws enacted by the government to combat these environmental problems are to be discussed vividly in this unit.

#### 2.0 Objectives

The main objective of this unit is to imbibe the student with:

- a. Efforts of the Nigeria Government in combating the menace of environmental hazards through the enacted laws.
- b. This discussion will include the sources and scope of the concept of environmental law in Africa, particularly Nigeria.

#### 3.0 Main Contents

**3.1 The Post – Independence till date:** Environmental Law in Nigeria may be seen at early stage as era of timid and era of indecisive decision on the issue of environmental factors. Though, the era of colonialism and immediately after, can not be marked as the historical origin of the introduction of the measures, ways and means

to control our environment in terms of adequately sustaining personal and public health. This time under study shows the efforts of government to curtail some kinds of environmental pollutions.

Based on the quest to nip on the bud the hazardous substances that threaten our environment, the criminal code , Cap 77 Laws of the Federation of Nigeria 1990 comprises of provisions which sanction on the pains of punishment for fouling the falling of water in spring, stream, well, reservoir, tank, the burial of corpses within a hundred yards of a dwelling house, vitiation of the atmosphere so as to make it nexious to the health of persons, and manufacture of matches with white phosphorus (Nnadozie K. C. 1994: 2- 3)

Moreover, it was not unusual that Nigeria government was not paying serious attention to the environmental problems at the first decade of independence, but the nation was busy consolidating her industrial development being a very young nation. Truly speaking, 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 witnessed the development of cocoa industries which created many problems in terms of pollution which attracted industrial waste management in variably infected the environment with various kind of pollutants. In addition, 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 quagmire which usually associated with industrial development (Ola C. S. 1984: 152 -4).

In response to the above impact of industrialization on the environmental policy and programmes, a new course of environmental law had to be charted. This reasoning in the government circle brought about the enactment of some laws such as the Factories Act, the Oil in Navigable Waters Regulations 1968., the Petroleum Act 1969, the Petroleum (Drilling and Production), Regulations 1969, Petroleum Drilling and Production (Amendment) Regulations 1973, the Petroleum Refining Regulations 1974 and the Oil Pipeline Act, 1956 (Okoye N. V. 1990: 64-65), these laws and regulations to a greater extent depicts a sudden difference in the concept of environmental law from what was obtainable in the pre and colonial era. Ogbuigwe A. E (1985: 20-2) posited that the protection of the citizens' health, the balancing of his ecosystem, adequate management of natural resources, the problem of compensation of pollution victims, and socio-economic and political consideration actually accounted for this movement in the concept of environmental law.



The prominent question asked by an environmentalist, Okorodudu Fubara (1998: 4 – 6) in her popular work on environmental Law is, what were the implications of the third world negative attitude to the early environmental concerns for Nigeria in particular? She expressed her concerns further that while the environment was described as the “Issue of the year” throughout the world in 1970, it was not until eighteen years later that it became a prominent issue at the public and government levels in Nigeria. Worldwide, the environmental threats are noticeable in various forum 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 result into warning of the earth, melted ice-caps, deserts and flooded cities. There is tendencies for the atmosphere to run short of oxygen – the phytoplankton, a primary sources of oxygen from the sea/ocean may be affected. The nitric oxide emissions may adversely deplete the protective ozone layer therefore expose man to the deadly ultraviolet rays as a result of the fact that the shield that cover 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 across the globe. For example Toxic Waste in Nigeria 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, that was reported killing the villagers and their animals, it occurred in February 2010.

However, the changes which the 1072 United Nation Conference on the Human Environment held at the Royal Opera House in Stockholm on June 5, 1972 served as stimulus in North America, Indian, Western Europe, Japan and Africa. Although the efforts of most of the third world did not emerge until towards the tail end of 1980s (Imevbore A. M. A et al 1991: 35). Right from independence, Nigeria has not been outside the international policies and treaties on environmental protection campaign. Nigeria is a prominent signatory to a member of these multilateral treaties on environmental protections. In another word, Nigeria was among the 114 heads of governments present 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. In the subsequent

conferences, Nigeria have been very prominent, in Nairobi May 1982 where the 10<sup>th</sup> anniversary of the Stockholm Conference which reaffirmed the participating nations commitment to the protection and enhancement of the quality of human environment; in April 1982, Nigeria hosted the 69<sup>th</sup> Inter-Parliamentary Union (ppu 11). meetings at which an ad hoc committee on Education, Culture, and Environment adopted a draft resolution on the “State of the world environment. Ten Years After, the United Nation Conference on the Human Environment at Stockholm” not only that, 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. Although 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: 6-8). All these efforts are directed towards national awareness on the need to protect the Nigeria environment against environmental hazards.

The event described above was corroborated by the Minister of Works and Housing, Brigadier Maman Kotongura (1988) that: “The singular event has, hopefully, opened the eyes of the nation to the problems of environmental protection.

According to him “a new dawn has arisen” and that the government is now committed more than ever before, to protect the nation’s environment and preserve it as a heritage for future generations” (The Nigerian Environment Vol 1, December 1988 1). This 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 the formulation of a new mechanisms for environmental protection and sustainable development in Nigeria and is coming into place with a new approach to environmentally 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 12-14).

The government have realized the importance of healthy environment in achieving the administration’s 7 Points Agenda, as a result, the Vice President, His Excellency Dr. Goodluck Jonathan who represent Mr. President, His Excellency, Alhaji Umaru Musa Yar’Adua GCFR in a forum organized by the National Environmental Standards and Regulations Enforcement Agency (NESREA) between 22 – 23 October, 2007 in Abuja states 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 went into memory lane to drive home his point that since 1970’s there has been increased awareness and consciousness about environmental issues at all levels. At the global level, the United Nations and other multilateral organizations have, through notable global fora, 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. The result has been the creation of institutional arrangements and mechanisms for environmental management at global and regional levels. They have also encouraged national governments to create institutions for the protection of the environment and human health”

The president here reiterated the concern of the apex world organization that UNO “General Assembly had as the theme for the General Debate of the 62<sup>nd</sup> Session titled “Responding to climate change”, on that occasion, I articulated the peculiar challenges which climate change poses to the nations of Africa and the effects of the AU and regional organizations to face up to the challenges with the support of the international community.

Nigeria has been a very active player in most of the global environmental initiatives. We have also made efforts to operationalize the implementation of the various environmental agreements and other outcomes of these global initiatives at the country level.

Events surrounding the unfortunate Toxic Waste saga in the small town of Koko in Delta State (Bendel State then) in 1988 gave rise to 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, now Federal Ministry of Environment, Housing and Urban Development.

This situation however created a vacuum in the effective enforcement of environmental laws, standards and regulations in the country. To address this, the Federal Government, created, by law, a new institutional mechanism, the National Environmental Standard and Regulations Enforcement Agency (NESREA).

NESREA is charged with enforcing all the environmental laws, guidelines, policies, standards, and regulations in Nigeria. It also has the responsibilities for enforcing compliance with the provisions of international agreements, protocols, conventions and treaties on the environments to which Nigeria is a signatory". To the Nigerian Head of Government, the Compliance Monitoring and Enforcement of ecosystem, integrity and sustainable development is very important. However, "for an environmental compliance and enforcement program to be effective, it must visibly demonstrate to the regulated countries that environmental standards are enforced ... and public acceptance is central to the promotion of compliance, deference and enforcement. A healthy agreement is critical to the effective implementation of my Government's Seven – Points Development Agenda which constitutes our covenant with the Nigerian People. This informs the high premium which we place on environmental protection issues. It is also vital to the attainment of the goals and targets of global initiatives to which Nigeria is a party, especially the Millennium Development Goals. We recognize the prime place of re-building and expanding our critical infrastructure in our determined effort to rapidly regenerate our national economy. We also are determined to create and sustain the macro-economic prerequisites of a globally competitive economy. By the same token, we are conscious of the imperative of ensuring that our economic regeneration efforts are environmentally sustainable.

Poverty is at once a cause and a further affront on environmental degradation. The equitable, efficient and productive use of natural resources offers opportunities for sustainable livelihood. While industrial development offers opportunities for poverty reduction and self actualization, it also engenders challenges. That is why we must continue to encourage industrial development, innately being conscious of the used not to do this to the detriment of our environment and natural resources base. The complex relationship and linkages between different sectors: health, transportation, energy, agriculture, human resources, development, technology, water, etc and implication for poverty, human well being, environment and development need to be rigorously and vigorously pursued.

On our part, government will 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”. This fact is in line with Genesis Chapter 2, verse 15 of the Holy Bible which saddled man with sole responsibility of tilling and keeping of land for his sustenance.

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.

The Council of Ministers of the Organization of African Unity, 48 Ordinary Session, meeting in Addis Adaba, Ethiopia from May 19-23, 1988 issued its resolution – CH/RES/1153 (XLVIII) – on “Dumping of Nuclear and Industrial Wastes in Africa” posited that “Aware of the growing practice of dumping nuclear and industrial wastes in Africa Countries by transnational corporations and other enterprises from industrialized countries, which they cannot disposed off within their own territories. In this wise, Africa people and their government are very much conscious of the implications of abuse 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 lurching ‘third world’ into an era of social justice, self –reliance and sustainable development (in the 21<sup>st</sup> Century)” (Aina EOA and Adedipe N. O. 1991: 311).

Finally, seriousness on the part of Nigerian Government and hearkening to the 1972 Stockholm Conference and subsequent treaties on environmental sustainability and development to gingered governments into making national comprehensive rules, regulations and policies that lead to formulation of Environmental Laws. These laws promulgated have equally lead to the introduction of Environmental Law course into the Nigerian Universities, especially in the Faculty of Law.

#### **4.0 Conclusion**

It is no more news that Nigeria has become aware of the need to collaborate with the UNO treaties, Regional treaties, Conventions and partner with stakeholders relevant to environmental protection in her efforts to curb the repeat of Koko Toxic Waste Dump. All hands are on deck to sustain and develop our environment through the instrumentality of law.

## 5.0 Summary

In this unit, you have learnt the various moves by the Federal Government (U.N.O) and other stakeholders to establish, enact or promulgates laws to sustain her environment. Most of the rules, regulations, enactment, international treaties directed towards preventing environmental hazards were discussed as a background to the serious awareness on the concept of environmental law in Nigeria.

## 6.0 Tutor Marked Assignment (T.M.A)

- i. Why did it take Nigeria 18 years to embrace 1972 Stockholm Conference on Human Environment?
- ii. Itemise the activities of Nigerian Government to meet its environmental needs.
- iii. Highlight the intention of the Federal Government of Nigeria on the speech delivered by the VP on occasion of NESREA Forum organized in October 2007 in Abuja, Nigeria.

## 7.0 References for further Reads

1. National Environmental Standards and Regulations Enforcement Agency (NESREA): Report of the First National Stakeholders forum on the New Mechanism for Environmental Protection and Sustainable Development in Nigeria 22 – 23 October 2007, Abuja Nigeria.
2. Aina EOA and Adedipe N.O (1991) ed, The making of the Nigeria Environmental Policy (Ibadan, University Press p 311)
3. Okerodudu – Fubara (1998: vi – viii)
4. [http://www.unccd.int/knowledge/important Dates.php? 24/02/2010](http://www.unccd.int/knowledge/important%20Dates.php)

## UNIT 6

## **SOURCES AND SCOPE OF THE CONCEPTS OF ENVIRONMENTAL LAW**

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### **1.0 Introduction**

Environmental legislations continue to be enacted from Brussels and Westminster, International agreements treaties, conferences and E C Directives are speedily translated into various local legislations based on individual states peculiar environmental problems and as such serves as various sources of this course.

The marriage of comfort between law and the environment as discussed in the previous units has led to the establishment of another branch of law vital to social, economic and political life of every nation called ENVIRONMENTAL LAW. The scope of this course (Environmental Law) varies from one jurisdiction to another as there is variations in each legal system so also the case with areas of law. However, a particular reference to a Federal State of Nigeria stuff where the Environmental issues falls under concurrent list, have national environmental law, State and Local Governments Environmental laws existing side by side “The point must be further made that with respect to matters within the legislative competence of the States of the Federation, the unity of jurisprudence in Environmental Laws of States can hardly be guaranteed

### **2.0 Objectives**

At the end of this unit, students should be imbibed with the major sources and scope of Environmental Law. This knowledge of sources and scope of the concept Environmental Law will allow the student to have the in-depth knowledge of this course.

### **3.0 Main Content**

### 3.1 Sources and Scope of Concept of Environmental Law

Before the establishment of Federal Environmental Protection Agency Act No 58 of 1988, there was no National comprehensive statutory law that could be easily addressed as “national Environmental Law” Although there were on ground various statutes on environment. Due to lackadaisical and look warm attitude on the part of the Federal Government, Nigeria had no specific national law that dealt with issue of environment (Akinbola B. A. 2009, unpublished work). The scope of the concept of environmental law was in perspective by Thomas J. Schenbaum in (Environmental Law 1985; 4 - 5).

“What is the subject matter of Environmental Law? It should be obvious that preservation of natural systems is important but not the so concern. Other principal themes include resource use, the protection of conflicts among various user groups, and human health and safety. But the questions of law and where to draw the line between maintenance and degradation of the natural environment are nevertheless always of the present in some form.

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 and engineering. Accordingly, this chapter explores four perspectives that influences ways of thinking and making policy that are reflected in environmental laws.

The first perspective is to consider whether environmentalism is capable of providing knowledge that is useful for solving human problems. Is it accurate to view environmentalists as always being against progress? The second session looks at the field of economics and explores whether and to what degree economic theory can provide a framework for policy choice in environmental law. The third section looks at another aspect of environmentalism concern for the preservation of wilderness and the natural world. Is there any theoretical justification for this position? The forth section looks at the continuing debate our attitudes towards technology, resources scarcity, population and the future of mankind. These perspectives are present throughout the field of environmental law. Some people believe the law should be based on one perspective to the exclusion of some or all of the others. For example, advocates of preservation as the organizing principle may minimize the role of economics. Adherents of the economic approach use that discipline as the dominant focus of environmental decision making. But given the pluralism of American society, environmental law is likely to remain a confusing blend of several values

In the above analogy the writer pointed American environmental issue which is far beyond Nigerian environmental perspective. It is no wonder that most of the human



rights issues in Environmental Law are fore mostly articulated in International Environmental Law. In that wise, this unit will focus specifically on the domestic aspect of Environmental Law, and, because of large volume of legislation in this field, only the Federal enactments and some few states laws shall be discussed.

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 seeks to regulate and protect the environment either directly or indirectly. (Akintayo J. O. A 2006:394). With these facts, the concept of Environmental law is projected from multi-vintage of the law as an instrument of both “Social and Economic” engineering Laws, policies and techniques which regulate the environmental problems identified here stated areas of social and economic concerns provide the framework of our environmental law (Okorodudu – Fubara 1998: 14 – 15).

It will be an incorrectable mistake if the scope of this concept is written and the sources of it is omitted. The discussion of the scope of Environmental Law in Nigeria makes an inquiry into the sources of law in Nigeria imperative. This search will enable the students and facilitators to properly assess legal and regulatory reforms in this area. It will also enable us to identify the techniques and the mechanism for further enquiry and reform. From the practical or legal practitioners point of view, a source of law is that to which someone, whether a legislator, jurist, law agent, or private individual goes to find out what the law is (Robinson, 1997: 25). These sources of Nigerian law includes: the Constitution, legislations, 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. It is pertinent to note the contribution of religious based laws and customary law (beliefs, myths, norms and custom) to the protection of the environment is noticeable from the angle of conservation practices they promote (Akintayo J. O. A 2006: 394 – 5) Traditional African cultural and social practices play a dominant role in this connection (Okediran 1996). What one is driving at is that

Africans are not mindful of the essence and protection of environment in their societies. The efforts directed toward enhancement of the colonial lords, introduction of their legal system and eventual settling down in the continent after the historic partitioning of Africa with its embedded penal technique.

The major sources of Environmental Law to be focused in this lecture shall include International Law which encompasses treaties, forums conventions/conferences, agreements and protocols which Nigeria is a signatory and has adopted these International laws. However, reference would be made to the Nigerian Constitution and Nigeria Legislations, the Common Law and Case Law.

### **3.2 International Law**

International law as a source of environmental Law, the United Nation Organization through the efficacy and efficiency of International law recognizes the sovereignty and personality of each state among the committee of nations. As a result, 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 is in violable by any state regardless of its acclaimed power in the committee of nations.

The concept of sovereignty of nations saddled the states with the duty to respect and honour international obligation agreements, which is in form of conferences, conventions, treaties and protocols. It is interesting to note that in the post second world war era, the United Nations body did not deliberate on environmental issue at all but the major bordering issue at that material time was maintenance of world peace and to eschew all acts that can disturb world peace. Therefore no particular mention was made about the environment. As time went on, there are specialized organizations within the ambit of UNO that are saddled with the environmental responsibilities, these are the Food and Agricultural Organizations (FAO) and the World Health Organization (WHO) (Malcon R. 1994).

Hitherto, the first book that gave a graphic perspective view of the indiscriminate use of pesticides where the public imagination was classically captured was launched in 1962. The book indeed dealt with the area later known as 'Environmental Revolution' and laid a special foundation for the emergent of law otherwise known as

“Environmental Law”. The book was written by Rachael Carlsen entitled “Silent Spring” (Lawrence Atsegbua, 2003:11).

The environmental pollution and its vices caught attention of the world and is today receiving considerable attention. The major effort toward combating the menace of environmental pollution started precisely in 1972 at Stockholm Conference as Human Environment by the UNO. This conference was the first ever move by the Nations of the World to address the threat of environmental hazards universally and an initial effort to diagnose the unsatisfactory state of global environment. For instance, in India, the commitment to this international effort has given birth to environmental movement, and protection of the environment received constitutional status in 1974 (Dharmandra S. S. 2007: XI). Whereas, in Nigeria, there was no concrete evidence to show the seriousness on the part of Federal Government to make a comprehensive national legislation against environmental pollution, despite the hue and cries of the citizen against the menace of the environmental pollution. Ola C. S made a critical view of the situation when he wrote that, that “most Nigerians are sad and worried about the deteriorating garbage situation and health problems posed by industrial pollutants. The danger in an untidy environment is enormous. Most of the epidemics and other diseases that plague mankind and spring from improper handling of garbage”.

This apathetic state of Nigerian environment received Federal Government attention in 1988 when the first national law on environmental problems was promulgated especially to address the Koko Toxic Waste and subsequently to prevent future occurrence of such within and outside the country.

The air pollution problem has reached a crescendo in most of the world urban areas and cities. Lagos, Onitsha, Aba, Kano, Kaduna and Ibadan were regarded as one of the most polluted cities of African Continent. Although in the recent past, Lagos has singularly metamorphosed into a World Class Megacity with an amiable reduction in industrial emission and effluent from the over concentration of industries. Kano and Kaduna are also wearing a new look, just like Delhi is considered as one of the highly polluted single- cities of the world but with introduction of metro, the situation according to Professor Dharmandra S. Senger, the situation has improved.

The first accident caused by the air pollution in the modern time occurred in the valley of MEUSE, BELGIUM in 1930 and followed by Pennsylvania snag incident in 1948, and 1952, London snag disaster occurred. It is on record, the episode 104 which

occurred in 1969 blanketed 22 states of the Mississippi with air pollution haze. (Annual Publication, New Delhi 1989 pp 15 – 16).

Furthermore, the Bhopal Gas Tragedy may be mentioned as the World's most industrial tragedy amounting to air pollution by the release of 40 tonnes of poisonous methyl isocyanate (MIC) with the estimated casualties of more than 15,000 people and many Lalchs of residents of Bhopal were seriously injured.

The above occurrences no doubt led the UNO to organized a remarkable conference on the Human Environment in Stockholm in June 5, 1972 with prelenary session held at the Royal Opera House. This was a product of the urgent need to nip on the bud the menace of air, water, noise and land pollution by the rapid industrialization processes which has captured the world. The conference came out with 4 issues towards achieving its policy goals, that is:

- i. There were 26 Declarations of Principles
- ii. There was an action plan, which contained 106 recommendation, which included the proposal to set up the Earth Watch.
- iii. There was the setting up of an environmental fund which would be funded by member states on a voluntary basis.
- iv. Setting up of UN Environmental programme whose aim is to develop international environmental law and a member of treaties and guidelines have been concluded with its support.

Generally speaking, the Stockholm Declaration of June 5 1972 stated: "The capacity of the earth to produce vital renewable resources must be maintained and, whenever practicable, restored or improved. The protection and improvement of the human environment is a major issue which affects the well –being of peoples and economic development throughout the world.

It is worth to note further 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.

This principle gave open hands to the states to harness and amass their own resources within their juridical limits of their environment under the purview of the United Nation Charter and the concepts of International law. 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.

At this juncture, we shall be looking at some global and regional treaties agreement and protocols on environment which Nigeria has signed or acceded to. These include:

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.

Article 28 entitles everyone to a social and international order in which the rights and freedom set forth in the declaration can fully be realized in compliance with the dictate of international law, Nigeria has made provision for the social order.

2. Convention on the prevention of marine pollution by dumping of waste and other matters, 1972. This treaty was not ratified by Nigeria until 18 April 1973. The treaty provides measures to prevent dumping of waste and other pollutants into the marine environment.

Article 1 of the treaty states:

“... To promote the effective control of all sources of pollution of the marine environment and ... take all practicable steps to prevent the pollution of the sea by dumping of waste and other matter that is liable to create hazards to human life, damage amenities or interfere with other legitimate uses of the sea”.

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 Nigeria acceded 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. Articles 5 and 7 provides that:

- (a) The exploration of continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication (Cap 337 LFRN, 1990).

- (b) The Coastal state is obliged to undertake in safety zones, all appropriate measures for the living resources of the sea from harmful agents.
5. The Convention on the High Sea 1958: Nigeria acceded to the treaty on 30<sup>th</sup> 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”. Articles 24 and 25 which specifically relates to environmental protection states as follows:
    - (a) Every state shall draw up regulations to prevent pollution of the seas by the discharge of oil from ships or pipelines, or resulting from the exploitation and exploration of the sea bed and its sub soil taking account of existing treaty provisions on the subject.
    - (b) Every state shall take measures to prevent the pollution of the seas by the discharge of oil from dumping of radioactive wastes, taking into account any standards and regulation which may be formulated by the competent international organizations.
  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 and Agenda 21 call on the UN General Assembly to set up an inter-governmental committee to prepare for a legally binding instrument 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 50<sup>th</sup> ratification is recovered.
  9. “Dumping of Nuclear and Industrial Wastes in Africa” organized by the council of ministers of the organization of African Unity, 48<sup>th</sup> Ordinary session, meeting in Addis Ababa Ethiopia, may 19 – 23, 1988, issued in its resolution “Aware of the growing practice of dumping nuclear and industrial wastes in African countries by transnational corporations and other enterprises from industrialized countries, which they cannot dispose of within their own territories ... Bearing in mind the harmful effects of radiation from nuclear and other hazardous industrial wastes to human and marine life as well as to the

ecosystems on which they depend for their existence and 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 wastes generated in Africa –signed in Bamako, Mali on 30<sup>th</sup> 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 (Mokon R).
  - i. 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 jurisdiction of the states of the West and Central African Region. This was ratified by Nigeria on the 5 August 1984.
- 11 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.
12. African Charter on Human and People’s Rights . This charter was signed and ratified by Nigeria on 31<sup>st</sup> August 1982 and 22 June 1983. However, it came into force in Africa on 21 August 1986 where Articles 24 and 26 provides among others as follows:
  - i. All people shall have the right to a general satisfactory environment favourable to their development and
  - ii. Article 26 stated that:

“Parties to the charter shall allow the establishment of appropriate national institutions entrusted with the promotion and protection of the freedom guaranteed by the charter.

13. 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.

14. International Conference on the Establishment of an International Fund for compensation for Oil Pollution Damages which came into force on 16 October 1978. The major objectives were:

- i. To implement the international convention on Civil Liberty for Oil Pollution Damages

- ii. To ensure that adequate compensation is available to people who suffer damages caused by oil pollution resulting from the escape or the discharge of oil from ships. That is, victims of oil spillage must be adequately compensated
- iii. To ensure that the oil cargo interests bear a part of the economic consequences of such oil pollution damages to the relief of the shipping industry.

15. Based Convention on the control of Trans – boundary movement of Hazards, Wastes and their Disposal, 1989 which came into force on 5 May 1992.

The objectives of the convention are stated as follows:

- a. Reducing trans-boundary movements of wastes to a minimum, consistent with the environment's sound and efficient management of such wastes.
- b. Minimizing the amount and toxin of hazardous waste and ensuring their environmentally sound and management including disposal and recovery operations as close as possible to the source of generation.
- c. Assisting developing countries in environmentally sound management of hazardous and other wastes they generate. It was signed and ratified by Nigeria on 13 March 1991.

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 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 vis – a – vis treaties and this can be seen in Section 12 (1) of the constitution which provides that:

- i. No treaty between the Federation and any other country shall have the force of law except to the extent to which any such treaty has been enacted into law by the National Assembly.
- ii. The National Assembly may make laws for the Federation or any part there of with respect to matters not included in the Exclusive legislative list for the purpose of implementing a treaty.

### **3.0 Self Assessment**

Discuss the key objectives of the international treaties on the concept of Environmental law.



#### **4.0 Conclusion**

The scope of environmental law is very broad and students stand to gain a lot from mastering it including various sources of Nigeria law and the major sources of Environmental law. Environmental law can be sourced from the international law and domestic laws of each country, it depends on the various environmental problems facing them.

#### **5.0 Summary**

The scope of environmental law has been thoroughly elucidated and that of the sources of the concept. The last part of this lecture dealt with the primary sources of international law as one of the major sources of Environmental law. The International law as a source is based on international treaties, agreement, conventions and observation of protocols. It is generally accepted as a rule of obligation.

#### **6.0 Tutor Marked Assignment (TMA)**

- i. Discuss various treaties signed and ratified by Nigeria as enumerated in this Unit.
- ii. Identify and highlight the main objective of the first treaty on environmental law that led to the universal application of Environmental law.
- iii. Write short note on the following:
  - a. Scope of the Environmental Law
  - b. Stockholm Conference of 1972 on Human Environment.

#### **7.0 References/ Further Readings**

1. The Constitution of Federal Republic of Nigeria (CFRN) 1999; S12(1) & (2), S17
2. The African Charter on Human and People's Rights Ratification and Enforcement Act, Cap 10, Law of the Federation of Nigeria 1990
3. Malcolm R. (1994) A guide book to Environmental Law, London; Sweet & Maxwell
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5. Tummy Katyal and Satake M, (1989): Environmental Pollution, Annual Publication, New Delhi pp 15 -16
6. Okorodu-Fubara (1998) ... pp 10 – 12
7. Lawrence Atsegbua (2003), pp 9-16
8. [Http//ww. Unccd.int/knowledge/important Dates php?](http://ww.unccd.int/knowledge/important%20Dates.php) 14/03/2010
9. Dharmendra S. Sengar (2007)... pp 3 – 9
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## UNIT 7

### SOURCES AND SCOPE OF ENVIRONMENTAL LAW CONTINUED

#### **Table of Contents**

- 1.0 Introduction
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- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References/Further Readings

#### **Introduction**

In the last Unit, we started our discussion on the scope and sources of the concept of Environmental Law and International Laws as one of the key sources was extensively discussed. In this unit, the discussion on the sources of Environmental law continues with discussion of the constitution as another major source of the concept. Various views of legal authorities and constitutional law writers shall be considered.

#### **2.0 Objectives**

At the end of the lecture students should be able to:

- i. Define the constitution
- ii. Link the Nigerian constitution as one of the sources of the Environmental law.

#### **3.0 Main Content**

##### **3.1 The Constitution as a source**

The constitution is the fundamental law of a state laying down the system of government and defining the relations of the legislature, executive and judiciary to each other and to the citizens. (Hutchinson Encyclopedia 1992: 266). That is those laws, institutions and customs which combine to create a system of government to which the country regulated by those laws accedes (Osborn's Law Dictionary 1993:85). In a similar vein, Akintayo J.O.A. defined the constitution as the basic or fundamental law of a state. It is usually stated to be the supreme law. He buttressed further that, the constitution gives force and effect to every other law, be it legislation, case law /judge – made law, or custom or religious law either directly or not.

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. The constitution is also known as the grundnorm, that is, the highest or ultimate form of law. All other laws derive their relevance from it, any law inconsistent with provisions 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.

It is not however possible for the constitution to contain all the laws in a legal system. No wonder Anon states that “every law has loopholes” In the same vein, Aristotle (384 – 322BC) commented that ‘even when laws have been written down, they ought not always remain unaltered. The key function of any constitution is to provide the framework for the government and to allocate governmental functions and powers appropriately.

This supreme law, or rules usually spell out the collective aspirations of the people, its desire to remain as one political entity. The system of government, qualification to hold or vacate public offices, the rights and duties of government, the fundamental law, or rules, whether written or unwritten, rigid or flexible, unitary, federal or confederal as character, is the constitution of such unit of people or country (Ese Malemi; 2006: 1). According to Malemi, it is rule which prescribes the structure functions, jurisdiction etc of central, states and local governments.

Dhamendra Sengar (2007:14) posited that the modern industrial civilization has rendered man’s natural environment as a polluted one in pursuit of all assorted scientific and technological experiments and achievements.

Although, according to him, in environmentally conscious countries, the environmental problems are being handled through legislative action; some countries have given these problems constitutional status for the state to 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.

It is however regrettable that the Nigerian Constitutions since independence have not pay attention to environmental sustainability and development. Despite the futuristic mission of the coiners of 1979 Constitution, they made the greatest omission in this respect. The constitution was designed to take care of the country for 100 years only. Burnett – Hall was very right in his observation that it was not until the early 1980s that public concern for improved protection of the environment developed from being the preoccupation of a small minority to a popular issue. The environmental issue was regarded as the new subject in most of the third world as at 1975/76 era. Despite the embodying, though in a veiled and vague manner, the idea of sustainable development which had gained recognition since Stockholm Declaration of 1972. The event that occurred in 1980 to 1988 particularly in Nigeria paved way for inclusion of 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. No wonder, it was suggested that the drafters of the new constitution must have had the hues and cries of the people of the Niger Delta in mind when drafting the constitution. The Constitution provides as follows: “The state shall protect and improve the environment and safeguard the water, air, forest and wildlife of Nigeria”. The inclusion of environmental clause in the fundamental laws of the country is not peculiar to Nigeria alone. For example, 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) which provides that: The state shall take appropriate measures needed to protect and safeguard the national environment for prosperity; and shall seek cooperation with other states and bodies for purposes of protecting the wider international environment for mankind. With the above fact, the Ghanaians constitutional provision is more broad and down to earth than the 1999 Constitution of Nigeria. In addition, Article 41 of the 1992 Constitution of Ghana chided the citizen to protect and safeguard the environment. 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. The state shall supervise the protection and the conservation of the environment. Section 24 of the Constitution of the Republic of South Africa 1996 is more elaborate than the Malian and DRC clause.

The Constitution provides that everyone has the right

(a) to an environment that is not harmful to their health or wellbeing and

(b) 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 a natural resources while promoting justifiable economic and social development. Part 1 & 11 of the second schedule of the Constitution contained items on the Exclusive list.

To look beyond Africa, the Indian Constitution adopted in 1950 did not deal with environmental protection as such. The Environmental movement in India has its genesis in the United Nations Conference on Human Environment held at Stockholm in June, 1972, to draw the world's attention towards the universal problem of environmental pollution and for the first time, the provisions were inserted in the Indian Constitution by the 42<sup>nd</sup> Amendment in 1976, with regard to preservation of the environment throughout the country.

By this act of Indian government responding to international call became perhaps the first constitution in the entire world to attempt to secure the protection of the fragile environment. Thus, the constitution laid down the basic foundation for environmental legislations in the Directive Principles of States Policy and the citizens duty towards environmental protection in India. The Articles 48A and 51 A(g) of the Constitution Act (as amended in 1976) enables the state not only to adopt a protective measure but also to call for taking all suitable steps for improving an already polluted environment. With this analysis, the environmental problems has moved beyond individual affairs, third world nations but concerns of everybody worldwide, and equally part of fundamental laws of the states in the United Nations. The significance of ensuring environmental rights in national constitutions has been highlighted by Ogola (1995: 412 – 4) 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.

The inclusion of environmental clause into the CFRN 1999 can be said to be a landmark in the quest for the protection and sustainability of the Nigeria environment. Although, the clause in S20 of the constitution is far from meeting the yearnings 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. The Nigerian environmental clause cannot be compared to that of Mali, South Africa, CDR and India provisions or measure up to Article 1 of the World Commission on Environment's General Principles concerning Natural Resources and Environmental Interferences which stated inter alia, that all human beings have the fundamental rights to an environment adequate for their healthy and well being (Munro and Lamers, 1986: 38). In addition to this is the omnibus included that nobody can sue government in Nigeria for failing to perform its obligations on the basis of the provisions of the Chapter 2 of the Constitution. The third flaws is the inability of the Constitution to list environmental protection or the environment expressly as a substantive item in either of the legislative lists, particularly the concurrent legislative lists, making it an incidental and auxiliary matter.

Another source of substantive human rights provisions in Nigeria which worth mentioning is the charter of Human and Peoples' Rights that was enacted into law by the African Charter of Human and Peoples' Rights (Enforcement and Ratification) Act Cap 10, Law of the Federation of Nigeria. Article 24 of the African Charter of Human and Peoples' Rights provides that all peoples shall have the right to a general satisfactory environment favourable to their development (Rostron 2001: 24 – 29).

In a decided case, the Supreme Court of Nigeria in the case of *Abacha & Ors vs Gani Fawehinmi (2000)* held that the provisions of the African Charter are justifiable for as long as the Act incorporating same, that is, the African Charter of Human and Peoples' Right (Enforcement and Ratification) Act is not abrogated. It has been argued that the language of the African Charter reflects a general focus on collective economic and social conditions rather than on individual right (Worika, 2002: 316). Based on the above decision, the apex court has not pronounced on the nature and scope of the right guaranteed in Article 24 of the African Charter though as time goes on according to Akintayo J. O. A., the apex Court will draw inspiration from the decision of the African Commission on the complaint brought before the commission by two NGOs, the Social and Economic Rights Action Centre (SERAC) and the Centre of Economic and Social Rights (CESR) based in Nigeria and the USA respectively on behalf of the Niger Delta People of Nigeria (particularly the Ogoni People). This case is known as *SERAC vs Nigeria (Communication 155/6 Fifteen Annual Activity Paper)*.

The rights of Ogoni people that were allegedly violated include the right to enjoy the best attainable state of physical and mental health guaranteed under Article 16(1) and the right to a healthy or satisfactory environment guaranteed under Article 24 of the African Charter. The Commission found Nigeria to be in violation of the right to a clean environment under Articles 16 and 24 of the Charter (Ebeku 2003)

However, there should be clarification and reconciliation between the competing economic development and protection of environment interest. These two concepts has been the bane of central theme of the principle of sustainable development which has been posited to involve the successful integration of environmental considerations into development management (Macocick, 1990:44)

### **Self Assessment**

1. Discuss the importance of the Constitution as one of the sources of the concept of Environmental Law in Nigeria.
2. Environmental sustainability is anchor to the economic development. Do you agree?

### **3.2 Judicial Interpretation of Section 20 of CFRN 1999**

The Judicial Interpretation of Section 20 of CFRN 1999 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.

In this case, the Plaintiff, the Lagos State Government sued the Federal Government to protest the interference of the later and its incursions into the arguments made by the Lagos State Government in town and country planning. The plaintiff contended that the action of the Federal Government was predicated on the Urban and Regional Planning Act (Act No 88 of 1992) whereas the State had its own Town and Country Planning Laws which included the Building Lines Regulation of 1936 (now Cap 16 Laws of Lagos State 1994); The Land Development (Provision for Roads) Law, Cap 110; and the Town Planning and Country Planning Law, Cap 188. The principal relief sought by the Plaintiff was a declaration that by virtue of the provisions of sections 4 and 5 of the 1999 Nigerian Constitution, Urban and Regional Planning as well as physical development was a residual matter within the exclusive legislative list of the

States. The Supreme Court granted the relief sought by the plaintiff in part by a simple majority of 4 to 3. The apex Court noted the close relationship between environmental laws and country planning laws, but was not unanimous as to the exact place of planning and physical development control of land in the legislative list.

The majority submission by the learned judges shows that the apex Court took a restrictive view of the expression “environment” in arriving at the conclusion that town and regional planning is a residual matter under the constitution. The opinion of the minority judges equally carried weight despite their decision against the fact that Urban, Regional and Country Planning are parts of the Environment, and environmental matter is under concurrent list and not residual legislative list.

The 1999 CFRN made it very clear like other constitutions before it, the three organs of government, the executive, the legislative and the judiciary are the repository of powers. The legislative organs, the National Assembly is empowered to make or / legislate on matters or items 29, 36 (a – d), 39, 64, by virtue of Sections 4 (3) & (3) of the constitution. All the matters in the items falls within the ambit of Exclusive legislative list of the Federation. Only the National Assembly have the right and power to legislate on matters in the sections mentioned earlier. See **Northern State Power Company vs State of Minnesot et al. US Court of Appeal. Eight Circuit 1971, 2 ERC 1041.**

However, the constitution provides for both National Assembly and State House of Assemblies to legislate in the matters or items in concurrent Legislative List. The State Houses of Assembly may by virtue of sections S 4 (4), 6 and 7 make laws in respect of matters as specified in the Concurrent Legislative List.

There is limitation to the extent to which states can exercise such power, the constitution provides in section 4(5) that if any law enacted by the House of Assembly of state is inconsistent with any law validly made by the National Assembly, the law made by the National Assembly shall prevail and that the other law shall to the extent of the inconsistency be void. See the decision in **AG Ogun State & Ors vs AG Federation & Ors (1982) 3 NCLR 166 (Supreme Court of Nigeria, 1982).**

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.



The interpretation of the S20 of the 1999 Constitution of the Federal Republic of Nigeria was equally discussed in this Unit.

### **5.0 Conclusion**

In this unit, we learnt the constitution as a source of Environmental Law in Nigeria and the judicial interpretation of Section 20 of the 1999 Constitution of the Federal Republic of Nigeria.

### **6.0 Tutor Marked Assignment TMA**

- a. Discuss S20 of CFRN in view of the decision in *AG Lagos vs AG of Federation and Ors (2003) 35 WRNL*

### **7.0 References/ Further Readings**

1. The 1999 Constitution of Federal Republic of Nigeria
2. Osborn's Concise Law Dictionary (8<sup>th</sup> Ed) 1993 p85 Sweet & Maxwell
3. The Hutchison Encyclopedia (1992) 10<sup>TH</sup> Ed. BCA London: 266
4. Article 48A of Constitution of India (as amended) Act 1976
5. Jariwala C. M. (1992) "*The Constitutional 42<sup>nd</sup> Amendment Act and the Environment*" in S.L Agarah (Ed) Legal *Control of Environmental Pollution in India*, Banbay.
6. Ogola, B. D (1995): *Environmental Law in African*: Status and Trends p. 412 - 4

## UNIT 8

### SOURCES OF ENVIRONMENTAL LAW CONTINUED

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#### **1.0 Introduction**

In this Unit, we shall discuss the Legislations as one of the key source of Environmental Law. Legislations such as International legislations, Nigeria Legislations and Legislations in other jurisdictions. Apart from the general international legislations under the auspices of United Nations Organization. All these legislations are germane to the study of major sources of Environmental Law.

#### **2.0 Objectives**

At the end of this discussion, you should understand the following:

- a. Meaning of legislation?
- b. Nigeria legislations
- c. International legislations and
- d. Legislations in other jurisdictions

#### **3.0 Main Content**

**3.1 Legislation as a source of Environmental Law** means 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) is known as statutes or legislation. As a result, Nigerian legislations consist of statutes and subsidiary legislations. Subsidiary legislations are the statutes made in the exercise of powers given by a statute. It can be called subsidiary instrument or delegated legislations. Nigeria statutes consists of ordinance, Acts, Laws, Decrees and Edicts. Ordinance are laws passed by the Nigeria Central

Legislature before October 1, 1954 which ushered in a Federal Constitution into Nigeria (Obilade A . O 1998: 64) A statute enacted by the Federal Legislature otherwise called the National Assembly comprising of the Senate and the House of Representatives is an “Act”. A statute made by the House of Assembly of a state is called “Law” in a Democratic system while in a military administration, an enactment or promulgation made by the Federal Ministry Government is known as a “Decree” and the one made by the Government or Military Administrator of a state in a federation is known as “Edict”. All the 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 A. O. 1999: 126).

However, some of these statutes were enacted pursuant to legislative power of the Federation both under democratic and Military dispensations. Environmental legislations in Nigeria followed three stages of development. The evolution of Environmental legislation is very important in the study of the Environment and Environmental Law. (Akinbola (U.I). The first stage can be called the era of environmental sanitation laws, the second stage is the period of petroleum based environmental laws and the last stage is that of broad based environmental legislation (Akintayo J. O. A).

The first stage can be termed the first generation laws on safety of the environment. All enactments of this era are generally found in the Public Health Laws, the criminal and penal codes and series of other enactments including local Government Bye-Laws made pursuant to the Public Health law and other related legislations dealing with specific subjects which are found in the primary legislation. The penal technique is the underlying philosophy of enactments of this era.

The introduction of the English Common Law into Nigeria towards the end of the 19<sup>th</sup> Century, the rule of Common law and Equity for the sustenance and protection of the environment, inform of the Common Law of negligence, nuisance and the Rule in *Rylands vs Fletcher* (1986) were received into Nigeria. The British system of administration particularly the indirect rule entailed a system of creating a separate residential abode/accommodation for African indigenes and the British Administrative Officers and was rigidly enforced. This system has had its impact on the enforcement of environmental legislation and globalization of certain environmental values. The pressure of industrial civilization as it is now was not too pronounced then because of

the sparse population. Therefore, the problems of waste management which has now become a great menace was not acute. As a result, there was the need for Common Law of nuisance. The Public Health Ordinance, embodying statutory nuisance, was made in the early 20<sup>th</sup> Century. The Public Health Law confers wide powers on the medical officers of health in relation to abatement of nuisance, notification, sanitation and housing among others. In the present dispensation, the provisions of the Public Health Law exist side by side with the provisions of the Environmental Protection Agency Laws of each state. Whose coverage includes similar issues but with heavier punishment (Ishola and Akintayo (1999)). This experience has informed the promulgation/enactment of Public Health Laws.

The second era of Petroleum-based environmental legislation adopts both the legislative and regulatory techniques. The main theme of primary legislation is concerned particularly with general maintenance of standards and mainly a framework for legislation.

However, the major legislation dealing with the protection of the environment is to guard in regulations made pursuant to the primary legislation.

We are in the third era of development of environmental legislation. The problems inherent in the first and second era respectively are yet to be summoted and addressed. The narrow conception of limiting Environmental Law within the confines of sanitation laws is still very much pertinent in Nigeria despite the fact that Environmental law has expanded beyond this area. It must be stated here that in Nigeria we do not seem to be making much progress in the basic area of environmental sanitation as our streets are lined with filth, drains are blocked with rubbish and heaps of garbage in major towns and capital cities have narrow down the width of roads creating further problems of congestion. It is unfortunate that public facilities cannot cope with this basic aspect of public health. It is no gain saying that Nigeria is to a greater extent dirtier today than it was twenty years ago. The monthly sanitation which was introduced nationwide in the middle of 1980s and was abolished in the late 1990s has been revisited by many state governments. Some states were contemplating introducing house to house inspection by the sanitary inspectors, not even minding the highhandedness of the Officers coupled with the abuse of power to be bestowed on them and invasion of private rights of the citizens which were some of the reasons why the scheme was revoked/abolished.

Hitherto, basic facilities that can facilitate proper cleaners in Nigeria such as free flow pipe borne water, 24 hours electricity supply, easy and speedy waste disposal

techniques all these are either broken down or are in the state of disrepair or completely damaged or some are not available. The fact that Nigerians are still grappling with onerous environmental problems that is affecting our health, the statutes are very well made to address the environmental pollution and degradation. It is left for the authority to invoke the spirit of environmental law to combat these problems.

### **Self Assessment**

- i. Identify and discuss the three stages of environmental law in Nigeria

#### 3.1.2 International Legislation as a source

International legislation or law is a vital source of Environmental law. The principle of neighbourliness life was contemplated and emphasized in the decided cases of *Trail Smelter (1905) 3R.I.A.A ICJ Reports 1949 9 244 and Corfu Channel (1043R.I.A.A ICJ Reports 1949 9 244 and Corfu Channel (1949).*

The first case was concerned with a zink and smell on Canadian soil which was emitting large qualities of sulphur dioxide. These clouds of heavy smoke contaminated the air and fell as toxic precipitation on numerous farms in the USA. The issue was between Canada and the United State of America. The matter referred to Arbitrators. The case was decided as follows: “No state has right to use or permit the use of its territory in such a way as to cause injury by fumes in, or to the territory of another, or the property or persons therein, when the case is for serious consequences, and the injury is established with clear and convincing evidence. It provides for state sovereign right to exploit their own resources pursuant to their environment policies, but not to the detriment of other states. States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states, or areas beyond the limits of national jurisdiction”

The decision in this particular case laid the foundation for the Declaration of Principle 21 of the United Nations Conference on the Environment in June 1972 at Stockholm.

The second case, the Corfu Channel was decided by the International Court of Justice. It was decided based on the decision and the principle in Trail Smelter and ruled that no state may use its territory for activities which violate the rights of other states. These cases have inevitably formed the basis of treaties signed by Nigeria, which formed major sources of environmental law. The importance of international legislation can not be over emphasized as a source of Environmental law.

### Self Assessment

Enumerate the importance of the two cases analysed in this sub-Unit 3.2

### 3.3 CASE LAW as a source

It is the primary function of the courts as a key institution of judiciary to interpret the law. The law is therefore better defined as what court says it is. When a judge takes a decision in a particular case he disposes the immediate problem that comes before him and also lays down a legal referable principle which other judges, practicing lawyers and legal writers have to follow. The case law is a source of Environmental law in Nigeria and at the international terrain, this is evident in the last discussion in the sub –unit 3.2 above. The environmental law cases in different courts can be divided into two categories – Civil and Criminal cases.

When the civil cases are instituted by a private individual or group of persons against a wrongdoer to recover damages, that is monetary compensation for breach of the Plaintiff's legal rights, criminal jurisdiction of the court is involved when a specific provision of the law or regulations made thereto has been violated. Nigeria Courts still employ the common law principles of trespass to land, negligence, and the Rule in *Rylands vs Fletcher (1866)* in dealing with environmental claims (Syllon, 1989 p. 90 -6). These are specific provisions in the Environmental legislations have imposed on the court duty to access what is reasonable compensation in the event of dispute between parties. Access to court in environmental cases is inevitably important. Section 251 (1) (vi) of the 1999 Nigerian constitution vests exclusively in the Federal High Court jurisdiction to try cases and matters concerning with or pertaining to mines and minerals, including oil fields, mining geological surveys and natural gas. 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)*.

The role of courts to interpret the law and the outcome of it – case law is best appreciated where there is judicial activism. The reality of this can be seen in the

decided cases of *Adediran v Interland Transport Ltd (1986)* and *Sawa v Amaekeree (1993)* where it was decided that S6(6) of the 1979 Constitution vested in an individual the unrestricted access to the courts for the determination of his civil rights and obligations. In line with this decision, any role of common law requiring a potential Plaintiff to seek and obtain the consent of the Attorney General in public nuisance cases is now null and void. This was the decision in *Amos's case (1977)* before the decision in Adediran's case where it took seventeen years without specific remedies in the account of the structure of the law which required the Attorney General to institute an action to redress wrong done to others.

### **Self Assessment**

Law is best defined as what the court say it is. Do you agree with this assertion?

### **3.4 Common Law as a Source**

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. The law of Torts under the Common Law prescribed protection and control of environmental pollutions. Although, tort can be defined as civil wrong which entitled the injured party to claim damages for his loss or seek an injunction for the discontinuation or prevention of further torts/wrongs against the other party or remedying the wrong by ordering the tort feisor specific performance. It is any wrongful act, other than a breach of contract which entitles anyone injured or suffering thereby to damages from the wrongdoers or tort feisor.

Under the Common law, there are four torts specifically relevant to the control of environmental pollution, that is, Negligence, Nuisance, Trespass and Strict Liability. Each of them shall be discussed independently as follows:

#### **3.4.1 Negligence**

Negligence is the breach by the defendant of a legal duty to take care which results in damage to the plaintiff. It may signify a state, that is, either a person's inadvertence to consequences of his conduct or the deliberate taking of a risk without necessarily intending the consequences attendant upon that risk (Osborn's 1993: 277). In addition, it is a term of the first importance in Law. It figures in criminal matters where it is described usually as criminal negligence if death results from criminal negligence, the crime of manslaughter is committed.

From the angle of Torts Law, negligence constitutes a special cause of action usually involved in connection with personal injuries or damage to property. There must be a

duty imposed by law on the defendant to take care. A breach of that duty by the defendant which results in damage to the plaintiff constitutes the torts. For example negligence by the driver of a vehicle on the highway.

However, the question of whether a person is negligent or not has to be decided by the application to each particular case of a general rule, that is; Did the defendant act as a reasonable man would have acted in the circumstances? The standard of the “reasonable” man is not that of a man of exceptional skill or mental agility. Just as it is not that of a man of subnormal skill or mentality. A person may fall short of the highest standard of care, and not be negligence in law. Torts can only be committed where there is a breach of a legal duty to take care, resulting in damage which though not intended by the Defendant is nevertheless forceable (Winfield and Jolonitz 1998: 90)

In environmental litigation in negligence, the Plaintiff in order to succeed must prove the following principles:

- i. The polluter owed him a duty of care
- ii. The polluter is in breach of that duty of care
- iii. The breach has caused foreseeable damages to the Plaintiff

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.

### **3.4.2 Nuisance**

Nuisance is any conduct or condition of the things which unlawfully interferes with some ones enjoyment of his land. That is “an inconvenience materially interfering with the ordinary comfort physically of human existence, not merely according to elegant or dainty modes and habits of living according to plan and sober, simple, notions among the English people per Knight Bruce B. C. in Walter vs Selfe (1851) 4 De G & S. M 332

However, under environmental law, the victim (plaintiff) of negligence of tortfeasor, it is trite law that certain rules and principles need to be proved as in Negligence. 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.



### 3.4.2.1 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 society are entitled to, such as the right to fresh air, or travel on the highways. It can also be seen as a large number of acts injurious to the public at large, such as keeping of a common gaming house, or the obstruction of highway. Though, nuisance of this kind are criminal offences and may give rise to an action for damage as civil wrongs.

### 3.4.2.2 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. In a decided case, 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 ALLNR 768*). The act of private nuisance include interference with an easement such as blocking up of a right to light enjoy by the window of a house, acts of wrongfully allowing the escape of harmful things on to another person’s land. For example smoke, smells, noise, water, fumes, gas, heat inebriations, electricity , disease – germs, animals and vegetation. Nuisance here is commonly continuous injury, and is actionable only at the suit of the person in possession of land injuriously affected by it, there must be identifiable damage to the victim/plaintiff. Mostly the remedy for a private nuisance is either by abatement or by an action for damages injunction or mandamus.

### 3.4.2.3 Distinction Between Public and Private Nuisance

The actual distinction between public and private nuisance is that the former is a crime and where the nuisance is public, an individual ordinarily lacked the capacity to sue the tortfeasor because he has no right of prove unless he can prove that he suffered untold hardship or damages more and above that suffered by the public.

Before 1979 and under Common Law, however, actions based on public nuisance can not be instituted without the consent or by the Attorney General of the Federation or that of the State as the case may be. Any action filed contrariwise 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 necessary for the competence of action in Public nuisance.

In addition, 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”.

In this wise 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 adjoining land to his property. Irrespective of the problems attending the prove, the rule has no doubt been successfully applied in environmental law cases/litigations. Most particularly, those involving the oil sector, that is, oil spillages. In this regards, the apex Court (Supreme Court) had no difficulty in affirming the defendant’s due and necessary liability under the rule – where there was an escape of oil from a defendant’s oil field into the Plaintiff’s ponds, lakes, farmland and sources of drinkable water and causing damage.

#### **4.0 Conclusion**

Legislations, International law and case law are very important sources of Environmental law. All these statutes and others to be discussed laid foundation for Environmental legislations both in Nigeria and other parts of the world.

#### **5.0 Summary**

This Unit has discussed extensively the following sources of Environmental legislations.

- Nigeria legislations
- International law
- Case Law.

#### **6.0 Tutored Marked Assignment**

1. Write full note on any two of the sources of environmental legislation discussed in this unit.
2. What type of cooperation and coordination is required between the Federal and State governments in promulgating and enforcing environmental legislations

**7.0 References**

1. The Universal Home Lawyer, Odhams Press Limited, London
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6. Ola C. S. (1984): Town Planning and Country Planning Environmental Laws in Nigeria, UPL, Ibadan.
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**MODULE 2****ANALYSIS OF ENVIRONMENTAL DEVELOPMENT AND ITS PROBLEMS**

- Unit 1: Legal Analysis of Environmental Problems
- II Political point of view
  - III Social /Cultural View
  - IV Hazardous and Toxic Waste in Africa

**UNIT 1****LEGAL ANALYSIS OF ENVIRONMENTAL PROBLEMS****Table of Contents**

1. Introduction
2. Objective
3. Main Content
4. Summary
5. Conclusion
6. Tutor-marked Assignment
7. References/Further Readings

**1.0 Introduction**

The natural environment comprises of the sum total of all conditions and influences which affects the life and development of an organism. These includes natural resources 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. These natural elements endowed our environment has been badly affected by the activities of human beings as a result of industrialization. The whole environment become polluted because of human beings careless to maintain and sustain the environment he found himself. For the purposes of protecting and improving the quality of the environment and 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 Environmental law.

**2.0 Objectives**

At the end of this Unit, students should be able to:

- i. To study the legal challenges of environmental law.
- ii. To study the legal control of hazardous substances and equally tackle the legal regime for preventing and controlling the pollution caused by the discharge of industrial effluents and emission.

### **3.0 Main Content**

#### **3.1 Legal Analysis of Environmental Problems**

“... while the world may be worried by growing concerns about environmental problems in the upper atmosphere such as global warming and ozone depletion, we are threatened in Nigeria by fundamental environmental challenges which include draught and desertification, coastal and land erosion, harzardous domestic garbage and industrial toxic waste, industrial and air pollution which has generated unpleasant social conditions, colossal loss of life and means of livelihood” (Senator Grace F. Bent 2007:18)”. The effluents and emissions from harzardous 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 harzardous wastes” (Dhamendra S. Sengar 2007:9)

These problems confronting our environment need urgent solution to allay fear of mankind that the current rate of destruction might lead to a very bleak or outright wiping out of the earth and the inhabitants. And attempt to proffers solutions to the various biting problems affecting the world’s both in the area of development and environmental pollution. The control and regulation of these gamut 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 efforts by all countries world over to achieve environmental development and sustainability cut across. This made various conferences, treaties and agreement organized by the United Nations have come up with different environmental laws to stem the environmental pollutions. However, the nature of environmental problems in each state will definitely determines what nature of law to be enacted. For instance in India, many rules and regulations have been put in place, the same thing applicable to United States of America where there are varieties of laws to combat environmental problems from the Federating States, many developed and developing countries has follow suit, no matter the degree either fully or partially on ground. In the words of

Atsegbua et al “The direct proportion between efficacious and stringent environmental law and development is therefore not coincidental.

Environment is the totality 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, Yinka Omerogbe posited. In this wise, the problems facing the enforcement of laws for controlling, protecting and sustaining the environment need to be critically considered with the aim of proffering solution to the indentified problems.

The areas of focus shall include the conflict between development and environment, social –cultural impact on environmental policy, non –compliance and enforcement of environmental laws; Harzardous wastes and its management, the inadequacies and constrains in the application and enforcement of conservation legislation. All these shall be discussed as you progress in this module.

### ***Self Assessment Exercise***

Identify all the problems bedeviling the enforcement of Environmental rules, regulations, policies and laws.

## **3.2 Development and Environment**

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 advanced nations otherwise called industrialized nations had started their own development ever before the establishment of the third world nations or less industrialized. The main issue is that development cannot take effect outside the environment. The environment to this extent is synonymous with development and pollution of it. Therefore, the problems created by the advanced countries who are highly industrialized ahead of the developing nation have made their own development very remote and retarded. The main problem is how to strike an equilibrium between environmental interests and the development interests of the third world nations. To address this issue, of disparity and conflict of these interests made The United Nations Organization to come 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

needs of the present without compromising the ability of future generations. It is also defined as a requirement that the use of resources today should not reduce real income in the future”.

However, this requirement may not be applied to the present development, if we do not want to run fowl of the problems we are trying to solve.

It is therefore advocated to use the new mechanisms to achieve developmental goals and the environment will not be affected or injured through the application of legal framework. These new environmentally friendly procedure are costly and can also be achieved through no – growth policies. Another problem may be the inability of the developing countries to afford it because they will rely on the obsolete technology expert bequeath to them by the advanced technology countries. The truth is that these countries must develop, the only non-sustainable developmental measure open to them is increased use of energy worldwide. Though, uncontrollable use of energy consumption could be injurious to the earth.

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 corroborate this fact, Hunt Bobeff and Palmer posited that “No growth policies fashionable in some quarters and often in ones that enjoy comfortable living standard are not favoured by those who find it difficult to meet their basic needs. This 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.

Given past trends 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**

- Lead to environmental abyss
- Lead to very low life expectancy and increase in birth especially in the third world with almost 75% of the globe population.

- The push for the development on the part of poor nations will mean more pressure on the environmental resources which are almost at the verge of exhaustion.
- This may bring to pass the prediction of the United Nations that “The global population in 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 species on that kind of demographic knife-edge, it pays for these couples to make their choice carefully”

#### **4.0 Conclusion**

The analysis of environmental problem from legal point of view can not be over emphasized and it is the key to the discussion on environmental law. The conflict between the development and environment are equally discussed with the impact of population growth on the environment.

#### **5.0 Summary**

From this Unit, students have learnt:

- (i) Analysis of environmental problems from legal point of view.
- (ii) The landmark between Development and the Environment
- (iii) The effect of the population and development on the environment.
- (iv) The prediction of United Nations experts on Population

#### **6.0 Tutor Marked Assignment**

- i. State the impact of the problems identified on the development
- ii. How do you remediate the identified problems.

#### **References**

1. C. S., Ola (1984) *Supra*
2. Dhamendra S. Sandra 2007 *Supra*
3. “The Big Crunch” *Times Magazines* April/May 2000 p45
4. Lawrence Atsegbua 2004 *Supra*
5. *Internet supra*



## UNIT 2

### POLITICAL AND SOCIAL –CULTURAL VIEW

#### **Table of Contents**

1. Introduction
2. Objectives
3. Main Content
  - 3.1 The Impact of Town and Country Planning
  - 3.2 Socio –cultural effect on Environmental Law
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  - 3.4 Enforcement Constraints of Environmental Laws
  - 3.5 Political and Social Context of Enforcement Constraint
4. Conclusion
5. Summary
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#### **1.0 Introduction**

In this Unit, we shall discuss the impact of Town and Country Planning on Environmental law, Socio-cultural effect, its non-compliance and enforcement constraints of environmental law in Nigeria.

#### **2.0 Objectives**

At the end of this unit, students should be able to:

- a. Understand the impact of Town and Country Planning on Environmental Law.
- b. Identify the non – compliance and enforcement constraints of environmental law
- c. Who enforces what?

#### **3.0 Main Content**

##### **3.1 The Impact of Town and Country Planning**

The Impact of Town and Country Planning in the recent times, most states in Nigeria are becoming conscious of criticisms and are equally implementing suggestions that had become unnecessary for national and state development and planning. This development regulations tends to orderly regulates the planning and growth of a country, city and town by emphasizing standards for all areas of planning. The rule 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/Community Market space. All these are metaphor for a well laid out town/city or country planning which ensures further that 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.

Country/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.

Oni C. S. 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 importantly, 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, Lawrence Atsegbna et al states that in improving urban design in Africa, it is essential that adequate standard of density, land use and utility services be established, that sound 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. The element of design should become once again a living part of the organic pattern of our cities. An attitude to *quieta non movere* – let sleeping dogs lie - should be avoided by community leaders and environmental designers. There must be a search for beauty and undue reliance on controls should be avoided whether it is Haussmann’s Paris, Wren’s London, Burnham’s Chicago, or Lutyen’s New Delhi.

Furthermore, a city is not an inanimate object upon which any plan can be imposed – nor can it with impunity be hacked about or messed up by any kind of haphazard development that can be got away with (as it is found in some indigenous African countries especially Nigeria particularly cities/towns like Ibadan, Aba, Kaduna, Kano, Enugu etc). for observation of planning control and adherence to environmental

regulations before and after permission or approvals sought has been given, architects, builders speculators and contractors must pay special attention to the following hints.

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.

All these points as a matter of practice must be given consideration before obtaining approval or permission and it is important that the building must conform with the approved plan. The quantity and quality of materials used should be as such that match with modern architectural designs.

It is hereby suggested that the definition of ‘development’ should include timing and engineering operations since agriculture is not the only industry in the country.

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.

Causes mentioned include the disastrous effects of animals overgrazing, shifting cultivations of agriculture on a fragile soils, poor planting and maintenance of irrigation systems, forest clearing in flood – prone areas, stripping of tree cover for fuel-wood gathering , bushfires and lack of greenbelt planting against desert spread. (Ola C. S).

In the World Conferences of Agrarian Reforms and Rural Development has held many meetings on agricultural problems since the UN was established in 1945 and nearly all African and other third World nations have been participating and equally signatory to various treaties. For instance, special African concerns were discussed at the 10<sup>th</sup> FAO Regional Conference in ARUSHA, Tanzania.

In this wise, agrarian reform and rural development are generally considered to be political issues, conference studies also stress falling land:man ratios in most developing countries. Population growth is the main reason, but land lost through ecological deterioration is an increasingly important factor.

However, total rural population of the developing world, despite massive irrigation in cities is expected to grow by 900 million by turn of the century. 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 of deterioration.

Be that as it may, in Nigeria, where about 90% of the population 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 is continuing through new land clearing on fragile soils, bush fires and indiscriminate burning of trees and shrubs for charcoal.

In Tanzania, where 93% of the land is rough grazing forest area, growth of both human and animal populations is facing a change from traditional bush fallow farming to static agriculture and more of semi – arid lands. Egypt has made a major effort to reclaim desert land through irrigation, but faces continuous problems in the reclaimed areas from salinity, alkalinity and a rise in the water table. Israel's government equally have used technology to reclaim and develop rocky land. Meanwhile, drifting and deposits threaten huge areas of the Nile valley.

With the above facts, comforts stations containing washing, bathing and toilet facilities in public places are extremely desirable. Local government in urban areas should build parks, public toilets and little cafeterias or encourage co-operative or clubs to establish cafeteria in strategic places. Proper caring of public toilets can be financed by a system of coin slot payment. Refuse depots should be constructed within easy reach of the inhabitants and the old system of visitation of homes by Public Health Inspectors should be revived. In that wise, Town Planning Authority Officials whose time is expensive should have field officers to ensure that all buildings comply with approved building plans.

### **Self Assessment**

Highlight the impact of Town and Country Planning on Environmental Law.

### **3.2 Socio-Cultural Effect on Environmental Law**

Matters concerning the environment are variously conceived by the ordinary man on the street in both developed and developing nations all over the world. In the Western World, everybody is concerned about environmental issues, the awareness is very tick and people are ready without been compelled in the Western World. Whether plastic bags and aerosol sprays are ozone friendly and act of writing paper is labeled 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'

However, in most of average developing countries, particularly in Africa, all these matters are not known, 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. The main fact is that the average man lack luxury and cannot afford the time, effort and expertise that environmental concerns entails. His pre-occupation is how he and his extended family are going to survive with his meager salary, how to sleep in his dirty slum, dirty non-ventilated rooms and non spacious environment etc. According to an Environmentalist, he is concerned with his immediate survival and environmental issues beyond cleanliness and condition of his very immediate environment border on the esoteric and is considered an unattainable luxury and un avoidable.

The lukewarm 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. All States in Nigeria are to ensures that laws for immediate situation, health and well-being are more certain of success than those concerned with industrial regulation even though such industries may pose problems in nearest future. Although, 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.

Hence the governments at all levels, the Non-governmental Organizations, Human Right Groups now engage in enlightenment programmes so that average citizens can comprehend the degree of the risks of a polluted environment and tend to influence government policies, decision – making in environmental awareness matters and the resultant growth in the law. It is not all that ease to spread this gospel of environmental law awareness among the less or lesser levels of existence who 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 constitute 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: 5<sup>th</sup> February Vol 2:29).

### **Self Assessment Question**

Give strategies to imbibe our people at less urbanized area with culture of environmental policy awareness

### **3.3 Non Compliance vis Enforcement of Environmental Law**

Being ignorance of law is not a yardstick for flouting or non-compliance to Environmental law. The general dictum that ignorance of law is not an excuse for non-compliance with environmental regulation is a common phenomenon the world over and the presence of flagrant flouting 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 are as follows:

- a. Lack of environmental consciousness
- b. Lack of qualified personnel
- c. Corruption among the top hierarchy
- d. Misappropriation of ecological funds

- e. Government interest lacking/inadequate
- f. Lack of database
- g. Poor funding of activities and operations
- h. Economic considerations
- i. Lack of maintenance vis facilities
- j. Use of internal environmental audits
- k. Dearth of environmental pressure groups
- l. Weak enforcement of existing laws and regulations
- m. ICT capacity constraints
- n. Lack of environmental know how and technology
- o. Lack of or inadequate state of the art in-situ instruments for rapid detection of the banned goods and products.

All these 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.

### **Self Assessment**

Identify and provide likely solutions to the problems of non-compliance to environmental regulations in your country.

### **3.4 Enforcement Constraints of Environmental Laws**

1. To avoid wholesale destruction of the earth and its resources, governments normally make laws and set standards as bench mark which must not be exceeded for any enterprises or human activities likely to impact the environment negatively must comply with Standards 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 multimedia and integrated to avoid loopholes that can result in disastrous human consequences.

Before and after independence in 1960, most of the legislations that can be called environmental laws in Nigeria were resource specific or sector specific and were also available in piecemeal and not properly coordinated. 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, 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 pittance and a slap on the wrist for violators.

The most critical issue in Nigeria in recent times (since independence) is the absence of a National Environmental Law which will accord Federal Ministry of Housing and Urban Development (FMHHUD) with a legal mandate and from which the states as well as other sectors at the national level could adopt. Absence of a referenceable law prevents states of the Federation from having a national law to be referred to viz to set state environmental standards.

Hitherto, environmental management in Nigeria is no doubt hinged 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.

2. For the purposes of enforcement, the Federal Government of Nigeria established an Environmental Inspectorate Department called Federal Environmental Protection Agency (FEPA) and mandated the states who make up the Federation and FCT to follow suit by creating its equivalent at state level. State Environmental Protection Agency (SEPA). The FEPA and SEPA are autonomous Agencies who can sue and be sued, empowered to levy fines on offenders to a maximum of N500,000 and prison sentences of the offenders up to ten years. These fines are to be determined by the Court processes and no administrative automatic fine is allowed.

There is no specification or predetermined basis for the size of the fine which could be based on the volume, toxicity, damage or polluting history of the corporation. With the exception of Lagos State, pollution charge fund, all revenues from fines go to general 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).

3. Another major drawback/substantial non-compliance has been lack of or weak enforcement of existing laws and regulations. For instance, the FEPA gave industries 5 years moratorium in 1990 on the issue of industries complying with



the installation of pollution abatement facilities, which expired in 1994. Nonetheless, compliance rate by industries is generally low between 20 – 40%.

There is still inadequate inter-agency cooperation and collaboration including information sharing and more exchange among government Agencies that have mandate for chemical.

### **Self Assessment Question**

Trace the origin of non-compliance to the Environmental laws and regulations and proffer solution to curb the substantial non-compliance.

### **3.5 Political and Social Context of Enforcement Constraints**

The political and social context defines the issues which is very central to the enforcement of environmental laws. The major issues affecting the mechanisms of protecting and enforcing environmental regulations rested within this topic under discussion. From the perspective of Nigeria's federation, the charter of state and society, the cordial relationship between various institutions saddled with the management of the environment, the economic weaknesses and narrow technological base of Nigeria, the extensive/degree of abject poverty and the environmental crisis of the urban centres are key suspects in our enforcement problems.

Moreover, Nigeria is a Federal state, with 36 units called states and the Federal Capital Territory (FCT). This connotes that, there are constitutionally divisions of governments into 'three tiers', that is, the federal, the states and the local council among whom distinct powers and responsibilities are theoretically speaking unequally dispersed. However, due to unusual federalism of Nigeria union coupled with incessant military intervention in politics and longevity of such regime which tend to impose its scalache of command structure into the realm of governance and the fiscal centralization of oil revenues in the Federal government.

This made the later the strongest tiers of the government among the trio and made the states and local councils dependants on it for allocation of revenue on monthly basis.

The environmental policy and programs are decentralized among the three tiers of governments, that is, the responsibility of maintaining, protecting and sustainability of the environment is the responsibility of the trio tiers of government. The Federal government of Nigeria before the establishment of FEPA in 1988, it never occurred to it to pay attention to the environmental matters until it was included in the Third

National Development Plan (1975 – 1980) “ it recognized that environmental problems in Nigeria were often the result of extreme poverty and the lack of economic and social development”

The Constitution of Federal Republic of Nigeria made provisions for the three legislative list contained in the schedule where the Residual power resides in the states, the Concurrent power resides in both the states and the Federal Governments, while the Exclusive power resides with the Federal Government of Nigeria. The following are therefore under the Exclusive legislative list of the Federal Government of Nigeria, meteorology, mining, shipping, national parks, very large water bodies sparing states and international boundaries; the state government looked after health matters, social welfare, transport and public safety, while the local governments were charged with the following responsibilities; refuse disposal, construction and maintenance of roads, streets, parks and open spaces. The bone of contention that existed between the three tiers of governments especially during the 2<sup>nd</sup> Republic 1979 – 1983, lack of coordination of responsibilities, institutional overlaps and confusing jurisdiction made the enforcement of environmental regulations difficult.

The enactment of FEPA Act in 1988 to some extent reduced some constitutional conflicts particularly, the coordination of environmental management, but the Federal government and some states are yet to resolve the sharing of powers to regulate the environment and enforce environmental laws. A current example of such conflicts is that between FEPA and Lagos State Government. The former Director of FEPA held the view that:

“The politics of urban waste ... is a constitutional matter which the office of the Vice President has been advised on how to get the state to enforce appropriate waste disposal methods. It would be foolhardy for FEPA to dabble into an inter-governmental problem” (Ajamo et al 1994: 71 – 72)

With the above comment, it shows that, in a federation like ours, the enforcement could be hindered by the politics of inter-governmental relations; thereby rendering the implementation of environmental standards and laws to a greater extent impotent in protecting, and regulating the environment. This conflicting aspects of the constitution need to be properly addressed and resolved because the issue of the environment cannot be toyed with or allowed to degenerate into the level of total neglect as a result of unresolved conflict among the three tiers of government.

#### **4.0 Conclusion**

The issues discussed in this unit are very germane to the study of environmental law, that is, the effect of town and country planning on environmental law; the social cultural effect on environmental law, non-compliance which tend to slow the pace of enforcement of environmental regulations, the political and social context of enforcement constraint, all these are the basis of enforcement which need to be properly addressed in due course.

#### **5.0 Summary**

In this unit, the enforcement constraints has been dealt with from social-cultural cum political context both minor and major non compliance were discussed. And no doubt students must have gained from the above analysis.

#### **6.0 Tutor Marked Assignment (TMA)**

- i. Identify some constraints hindering the enforcement of environmental laws and properly address the issues identified.
- ii. “The issue of environment and its protection, sustainability is an inter-governmental conflictual issue which need to be addressed constitutionally”  
Do you agree with this statement?

#### **7.0 References/Further Reading**

- i. Constitution of Federal Republic of Nigeria 1999
- ii. Ajomo A. O. and Adewale O. (1994): Environmental Laws and Sustainable Development in Nigeria, Lagos. Nigeria Institute of Advanced Legal Studies, Lagos.
- iii. Ola. C. S.

## UNIT 3

### HAZARDOUS AND TOXIC WASTES IN AFRICA

#### **Table of Contents**

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  - 3.4 Proposed Reforms/the way forward
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6. Tutor-marked Assignment
7. References/Further Readings

#### **1.0 Introduction**

The problem of hazardous wastes, dumping of toxic wastes to Africa became known in 1988 as a result of the Koko Toxic Dump. There are now conservation legislation, but there are lots of hindrances affecting this legislation. Its inadequacies and constraints in its enforcement and the proposed reforms/ the way forward shall be thoroughly discussed in this unit.

#### **2.0 Objectives**

At the end of this unit, students should be able to:

- i. Know the impact of hazardous wastes in Nigeria
- ii. Know the effect of exportation of toxic wastes to Africa particularly the Nigerian environment.
- iii. Know the inadequacies and constraints against the enforcement of conservation legislation and what is the way forward/proposed reforms

### **3.0 Main Contents**

#### **3.1 Hazardous Wastes**

Hazardous wastes is a constraint to the protection and sustainability of our environment. From 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. 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.” The problem of the trans-boundary movement of hazardous wastes clearly shows a reason for the above statement which some might find unduly pessimistic. In recent years, many African countries especially those located very close to seas and the adjoining rivers have suffered this fate when unknown industrialized nations used them as dumping grounds for nuclear and industrial wastes. The wastes continue to be generated for the purpose of economic reasons.

The menace of hazardous wastes is an embarrassment to the African continent. The Second Citizens Report on the state of India’s environment gives a detailed account of the kind of industrial growth that has already taken place in India, the same applicable in California and Australia.

As a result, there is need for stringent environmental regulations and heightened public awareness in most of the affected nations if these wastes were to be disposed of within the territories where they were generated, though, the costs involved will be quite enormous. As a result, they arrange for the disposal in countries with little or no knowledge of the dangers/implication involved in consideration of an amount which appears large to the cash strapped country but which is a small fraction of what the company would have paid to dispose of it within its own territory. For instance, the protest by Germans over the transportation of toxic waste through German rail lines is a good case in point. But this type of protest are not usually heard when such harmful hazardous wastes are shipped to Africa.

It is unfortunate that these trans-boundary movements are allowed and facilitated by the governments of the highly industrialized countries who have these waste products produced and exported.

Thus, the Council of Ministers at the O. A. U forty –eight Ordinary Session, meeting in Addis Ababa, Ethiopia, from May 19 – 23, 1988 issued its resolution –

CH/RES/1153 (XLVIII) – on “Dumping of Nuclear and Industrial Wastes in Africa.” It states that: Aware of the growing practice of dumping nuclear and industrial wastes in African countries by transnational corporations and other enterprises from industrialized countries, which they cannot dispose of within their territories, Bearing in mind the harmful effects of radiation from nuclear and other hazardous industrial wastes to human and marine life as well as to the ecosystem on which they depend for their existence.

- (1) DECLARES that the dumping of nuclear and industrial wastes in Africa is a crime against Africa and the Africa people.
- (2) CONDEMNS all transnational corporation and enterprises involved in the introduction in any form, of nuclear and industrial wastes in Africa; and
- (3) DEMANDS that they clean up the areas that have already been contaminated by them...”

Before this decision, there was the OECD Council Decision and Recommendation on Trans Frontier Movements of hazardous wastes of February 1, 1984 and OECD Council Decision and Recommendation of Experts of Hazardous Wastes from the OECD Area of June 5, 1986, which seek to facilitate and thereby tacitly encourage exportation.

Hitherto, in the pre-development era, most developing countries, relied on established norms of social behavior for protection against imminent environmental disasters e.g floods, fires etc in the early days of industrialization the established norms could hardly meet the need of modern society.

Rapid and large – scale social, economic, scientific and technological developments are increasingly demonstrating the essence of substantive policies and measures of protection against realistic environmental risks confronting mankind in modern society. Realizing all these facts, the African Heads of State and Government in the Declaration issued at the July 1985 Summit in Addis Ababa stated that “ ... we are determined not only to cope more sufficiently with current and future emergencies but are also determined to go beyond emergency”

National and international events have no doubt worked to change the orientation of the Third World Countries in general and Nigeria in particular, to the issue of environmental concern. As a result, statutes on environmental matters are now emerging on the national arena, though, not only to regulate the basic national environmental problems stated here, but equally to control the stubborn environmental problems of international dimension like the trans-boundary movement and disposal of hazardous wastes.

The Nigerian Federal Environmental Protection Agency (FEPA) guidelines speak volumes in corroborations of the aforesaid that “Realizing the low-level of environmental awareness in developing countries, coupled with the non-existence of environmental protection laws, and the abject poverty of these nations, the developed countries have within the past decade embarked upon “Toxic wastes trade” or “illegal Dumping of Toxic wastes in poor, debt strapped developing countries” (Omorogbe Yinka. p343). From the researches conducted in the recent times, these countries can not be said to be innocent victims rather, there are contractual agreements between their government and the corporations. Being poor countries ‘so to say’ they entered into those contracts because of the financial gains involved, ignorance of the dangers of their actions as a result of abject poverty pestering people’s life.

### **Self Assessment Exercise**

Enumerate the role played by the national governments and international organizations to reduce the menace of hazardous wastes.

### **3.2 Export of Toxic Waste to Africa**

Prior to 1988, very little attention was paid to environmental issues. Export of toxic waste to Africa in particular became known in 1988. The catalysts that brought environmental issues to the fore was the Koko Toxic waste dump in Nigeria in 1987 which was discovered in several containers containing tons of radio active wastes. Koko is a small coastal community located in the present Delta State (formerly Bendel State) very close to the Atlantic Ocean. The subsequent investigations into the sources of the illegal dumping of large consignment of toxic wastes revealed that the waste came from PISA in Italy. It was further discovered that in September 1987, an Italian businessman, based in Nigeria and acting on behalf of an Italian waste disposal company shipped to the port of Koko 4000 tons of illegal radioactive industrial and nuclear waste over a period of eighteen months. It was brought into the country under the pretence of bringing industrial chemicals for a Nigerian construction company. It dawned on us that Africa has been turned into the World’s dumping ground for the deadly hazardous wastes. This attracted a lot of criticism and condemnation from all nooks and crannies. To corroborate this assertion, a Nigerian magazine African Concord commented on the trade in toxic wastes as follows.

“Re-echoes, what Europe has always thought of Africa: A wasteland and the people who live there, waste beings. Experts of toxic wastes in general has become a lucrative international business. The highly developed countries in the world particularly in the West due to the growth of powerful environment lobbies within

them are finding it more and more complicated to deal with their industrial waste. The solution has been to send these wastes abroad. The main victims are poor countries of the former Eastern Europe and the third World”.

The export of the harmful wastes to the foreign third world countries may mean two issues, that is, a new form of colonialism and modern slavery in form of neocolonialism or a kind of poison tourism which is purely economic. If this perception is right, the harmful industrial wastes experts have the means, well –with, and technology to effectively deal with hazardous wastes within their own boundaries. Although, it is cheaper to export the wastes than to get rid of it in their own territories. This is no wonder because the goal of capitalists economy must be achieved by all means, that is, maximization of profits. At whose peril? Exploiters care not.

However, it is remarkable to note that this incident provided the impetus 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 prohibit 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, that “ No person or group of persons shall dump or bury or cause or allow to be buried or dumped in any ... water within the state any toxic /hazardous substance or harmful wastes...” S9, Edict No. 9, 1997 Lagos State Environmental Protection Agency (LASEPA).

**The Act and the Edict provide for both Criminal and Civil liability.**

The harmful Waste (Special Criminal Provisions etc) Act prescribes the punishment of life imprisonment for certain listed offences as well as their attempt. The FEPA Act has since its enactment 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 Umaru Musa Yar'Adua GCFR and this has been published in the Federal Republic of Nigeria Official Gazette No 92 Vol. 94 of 31<sup>st</sup> July, 2007 By the NESREA Act, the FEPA Act Cap F No10 LFN 2004 has been replaced.



This, henceforth calls for an increase of existing cooperation and awareness among African Scientists, decision makers and the general public has to be well informed, coordinated and educated about the implications of the wastes by a competent body possessing capabilities to carry out both domestic and international policies and programmes to checkmate this menace.

### **Self Assessment Exercise**

Identify three key reasons why hazardous wastes was exported to foreign countries by advanced industries of the advanced nations?

### **3.3 Conservation Legislation: Inadequacies And Constraints In Application And Implementation.**

The essence of establishing environmental legislation is to provides foundation for policies and standards for substantive and procedural regulations which will creates institutions for execution of policies and programmes and equally enforcing the rules. It is unfortunate that Nigeria is yet to evolve adequate environmental jurisprudence to combat onerous menace of hazards facing our environment. Only very few Lawyers have been trained in the area of legal mechanisms for regulating and regularizing environmental conservation and quality. The outcome of this lapses is that the quality of environmental management and enforcement in the country suffers.

Secondly, it is also on record that little efforts has been made to date to implement the relevant rules. Awareness campaign has not been thoroughly embarked upon to sensitize and make the members of the society aware of which of the plants and animals are protected or conservable. In the absence of this awareness or inadequacy of such information, ability to identify them is very remote and rare. Majority of Nigeria indigenous hunter may not know which species of animal is protected by law. As a result many of these animals protected by law are extinct due largely to poaching.

Thirdly, the existing wildlife legislation is too specie –oriented rather than being spatially oriented. Though, it is trite an area can be protected without the fauna, however, fauna cannot be protected in a state of nature without natural habitant.

Fourthly, where there is no soil policy and soil legislations to be used to takle soil conservation despite the obvious linkage between deforestation and soil erosion on one hand and agricultural productivity on the other.

Another bordering issue is some of the parks and games reserves are not gazetted at this age. This is due to lack of clear definition of purpose and classification of parks and games reserves. The Nigeria Parks and Games reserves are in the State of Hot-tot. As a result, it is difficult for the management to enforce the existing laws and regulations because of lack of policy direction.

Sixthly, the policy makers and policy implementors / executors lack political will to enforce and implement the existing legislations even though inadequate.

Seventh problem is insufficient funds – where money is scantily available and the little fund available may be grossly inadequate to execute policies and programmes before the management. Unfortunately, the government will be expecting result despite their own neptitude. Most departments and establishments are bedeviled with inadequacies e.g trained manpower in certain areas such as wetland management, game preservation and impact assessment.

There is inadequate of standards and well equipped laboratories for testing, observing and monitoring purposes. In this wise, land use changes are rarely monitored on a regular basis.

In some big cities and towns, there are some few Non – Governmental Organizations (NGOs) in existence but their activities in this area of their interest is yet to be seen, may be, it was as a result of adequate awareness that is lacking on the part of the public and lukewarm attitude on the part of the government.

Conservation is a conflictual concept. That is, the conflict may became inevitable within the individual in the society, communities and institutions. This conflicts need to be amicably resolve in the interest of environmental protection and conservation which are inter-disiplinary in nature. The misunderstanding between social scientists and pure and applied scientists which is a product of policy mistrust is a good example.

Another point that need mentioning is the outright absence of spatial physical development at local and zonal levels which make appropriate land zoning and land use management very difficult.

#### **4.3.1 The Way Forward**

In view of the aforesaid, there is a need for improved environmental reform strategies in the Nigerian Environmental Laws and legislation particularly in relation to reinforcing regulatory compliance. This can be achieved through:

1. Using effective non-compliance penalty to create a deterrent to violators of environmental laws.
2. Using penalty caps reasonably for non compliance
3. Making it obligatory on operators or implementors to post environmental performance and reclamation bonds large enough to cover the cost of the envisaged environmental damages.
4. Strengthening civil penalties for pollution damages and criminal penalties for the most severe violations.
5. Removing all political and judicial obstacles that can hinder the communities, NGOs and the public from participating in environmental decision making and implementation.
6. Establishing and maintaining an internet based environmental information system, open to all interested persons, groups and countries.
7. Unconditional reconciliation between the social scientists and pure and applied scientist to come out with sound environmental policies and programmes to protect and sustain our environment.
8. Awareness campaign should be mandated all over the nooks and crannies of the local governments, states and federal coverage.
9. Provisions of well equipped world class, standard environmental laboratories for testing observation and monitoring purposes by the government specialized agencies.
10. Both lawyers and non-lawyers should be given adequate training to be able to cope with the day to day environmental policies and programs designed to meet the modern day challenges.

#### **4.0 Conclusion**

Conclusively, it is a share grace how Africa sustained herself the last several decades in the light of multivarious environmental hazards which she faced. As a result of millennium emphasis, the pressure from international organizations, intergovernmental efforts and the role of the NGOs. African states will be able to design a lasting sustainable environmental policies and programmes that would ensure the protection and preservation of the environment to the advantage of the present and coming generation of Africans. It is therefore pertinent to implore African nations to gear up to this task of environmental protection and sustainability.

## **5.0 Summary**

In this unit, we have discussed the effect of hazardous wastes, exports of toxic wastes to Africa, inadequacies and constraints to application and implementation of conservation legislation and the way forward.

## **6.0 Tutor Marked Assignment (TMA)**

1. Enumerate the effect of hazardous wastes to your environment.
2. Discuss the impact of environmental law to the issue of protection and sustainability of our environment.
- 3a. What are the significant of export of toxic wastes to Africa by the industrialists from advanced countries.
- b. Any legal implication to the environment?
4. Identify the inadequacies and constraints to conservation legislation and suggest likely reforms or the way forward.

## **7.0 References and Further Readings**

1. Ola C. S. (1984) supra
2. Lawrence Atsegbua et al supra
3. [http: www uneporg Document Default asp Document D = 97](http://www.unep.org/DocumentDefault.asp?DocumentID=97)
4. [http. www unep org Documents Defaultasp? Document ID = 76 & Article ID 1163](http://www.unep.org/Documents/Default.asp?DocumentID=76&ArticleID=1163) (opened on the 25/03/2010)

## **MODULE 3 CONSERVATION**

Unit 1: Meaning of Conservation and its Concept

Unit 2: Historical Perspective of Conservation

Unit 3: The importance of Conservation

Unit 4: Law and Policy Guiding Conservation of Natural Resources in Nigeria

Unit 5: Conservation Law and Policy

### **UNIT 1 MEANING OF CONSERVATION AND ITS CONCEPT**

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#### **Introduction**

- 1.0 The idea of conservation is as old as the founding of the earth itself, the application of the principle in its present parlance is relatively new. In the previous years 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**

At the end of this discussion, students should be able to:

- a. Define conservation
- b. Concept of conservation

## **3.0 Main Content**

### **3.1 Meaning of Conservation**

Conservation is an extremely broad topic and if you were to ask a group of people what they understand it to mean, no doubt, you would likely get a lot of different answers. Conservation means different things to different people. To some, it is mainly about preserving old buildings, others see it as the need to prevent pollution. Consider the following:

- Conservation Area; an area designated as being of special architectural or historical interest; for instance, since 1967 Local Planning Authorities have had a statutory duty to determine which parts of their area ought to be so designated and to take steps to safeguard the character of such areas (Planning Act 1990).
- Conservation Wild Nature of Plants and animals; the wildlife and countryside Act 1981 repeals and reenacts with amendments provisions of legislation relating to the protection of some wild animals, nature conservation, National Parks, Public rights of way (Leslie Rutherford and Sheila Bone 1993: 83 – 84).

Hornby A. S. (1984:309) 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.

The Hutchinson Encyclopedia (New 10th Ed . 1992: 264 – 265) posited that, “Conservation in the life sciences, action taken to protect and preserve the natural world, usually pollution, over exploitation and other harmful features of human activity. Since 1950s, there has been a growing realization that the Earth, together with its atmosphere, animals and plants life and mineral and agricultural resources form an interdependent whole which is in danger of irreversible depletion and eventual destruction unless positive measures are taken to conserve a balance.

Nevertheless, the most widely 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”. The document defines the objectives of the conservation of living resources among other thing as: maintenance of essential

ecological processes and life –support system, preservation of genetic diversity, and guarantee of the sustainable use of species and ecosystems. Generally, 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 1998:21).

With the above views on the meaning of conservation, the various definitions tendered to expose actual relevancy of the concept to human environment. No wonder the late 1980s saw a great increase in concern for the environment with membership of conservation groups such as Friends of the Earth rising sharply, globally, the most important issues include the depletion of atmospheric ozone by the action of chlorofluorocarbon (CFC) the green house effect and the restructive of the tropical rainforests.

### **Self Assessment Exercise**

Define conservation from various environmentalists views

### 3.2 Concepts of Conservation

There are many concepts that are important to conservation but you need to know very few relevant ones

#### **i. The Need for Natural Resources:**

The term natural resources like the concept of conservation has broad meanings as a result of more understanding of the relationship of human beings with the world they inhabit. In the late 19<sup>th</sup> century and the early 20<sup>th</sup> century, 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 environment that were used or capable of being used by people for various purposes: minerals and fuels, forest and grazing resources, wildlife, fisheries/acquirial animals and the likes. The concept could mean all of these or more.

In recent times, due to changes and researches, the scope of the concept of natural resources has been widened to mean the entire natural environment.

This include the totality of layer of the planet. The research for this is that all parts of the entire world are of value in that they contribute to the production of necessities and amenities that people demand. In this respect, 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.

**ii. Primary and Secondary needs**

In a nutshell, humanity's primary needs and natural resources requirements for sustenance 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.

In the early stage during the period of early man, these essential needs were supplied by wild vegetations and animals life, natural springs and streams and by the atmosphere and the sun. at the middle age when fire was discovered, the heating of shelters, and equally have access to varieties of foods especially those that can be made edible by being heated.

In the 21<sup>st</sup> century, the primary needs of people are almost the same today as a result of upsurge in the world population and depleted supplies of wild resources, a secondary category of needs has developed. These no doubt include those materials or energy sources needed to maintain an urban civilization.

iii. Agricultural and Urban development formerly the wild world where man found himself dependence on the available of wild resources including food were now lost and greater varieties food items are now available to satisfy people in the agrarian regions. As time went on, the population 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, to keep the over-exploited land nutrient in productive level at all times, the need for varieties of fertilizers became inevitable to ascertain the agricultural food production. Another area which needs to be mentioned is the discovery of cooking and eating utensils which were fashioned to meet need of some varieties of food materials that could not be eating raw. This led to the demand for more non-living natural materials/resources along with the rapid development of agricultural lands and settled villages.



The population increases as a result of concentration of people in cities and towns natural –resource needs increased. It is therefore incumbent on the authority to organize and expand agriculture over large areas in order to provide for the yearnings and aspirations of the urban dwellers in this respect. The efficient transportation system from farm to town centre where it is highly needed became essential, so also metals and other materials, stones and timber suitable for the building of houses, ships and vehicles. In addition domestic animals such as cows, goats, sheep, dogs and other varieties were required.

Nevertheless, human wants tend to multiply as the greater leisure of civilized life enables part of the problem of just to survive but equally to sustaining the environment for the generation unborn.

iv. Industrial and Technological growth. Due largely to the population upsurge and the aftermath effect, increase requirement for natural resources followed and snowballed into World Industrial Revolution which was the climax of the later part of 18<sup>th</sup> Century and the early part of 19<sup>th</sup> century.

This era of Industrial Revolution was coupled with scientific and technological revolution, which is still on in the 21<sup>st</sup> century. 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 demand for food has involved an enormous input into the agricultural economy of chemical materials and farming technology as well as an input of fuel energy that often exceeds the energy value of the food tend to put much pressure on the agricultural sector. Based on rational and otherwise behavior of human beings, the demand to luxurious and ostentation cum the high rate of wastefulness are excessive though not all consumption of resources is related to the supplying of needs. This is unfortunate aspect of human beings and the world we find ourselves.

However all in the confusion of needs, wants and waste related to the current use of natural resources, it is notable that the primary human requirements are the same as they were in primitive times. It would be possible for mankind to survive, although in greatly reduced numbers by using only wild vegetation and animal life to meet resource needs. This is because the living resources of the earth contain all the basic requirements for human survival. 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. By reducing population growth in the future, it would be

possible to enjoy a highly developed technology, a high material standard of living and a wide range of earth's available resources. But, 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" (Okorodudu Fubara 1998: 24).

Are the resources rationally used and are these resources put in multiple uses?

- i. From the modern application, the conservation of natural resources includes broad range of subsidiary concepts. One of these varieties of concepts is the rational use of the environment. This concept of rational application and usage include the preservation of some areas or resources in a specific undisturbed condition, this may be as a result of the fact that they are of scientific interest, have aesthetic appeal or have recreational value.

Preservation serves as ecological purposes by maintaining the function of the total environment, such as the protection of forests to ensure a sustainable yield of water into urban reservoirs and or in order to perpetuate an ocean fishery.

However, preservation or protection of natural resources is not the only area of concern of conservation. In this essence, rationale use of natural resources implies the direct use of resources for their commodity or recreational values.

Another concept is sustained yield, which is the understanding that hunting and fishing should take only the annual surplus of individuals so as not to endanger the breeding stock of some animals and fishes; this include the cutting and felling of trees and gracing of grasses should be done with natural processes with relative assistance of human effort when needed.

- ii. Secondly the concept of conservation means the recognition of the fact that natural resources have multiple values and can be put into varieties of uses. For instance, in addition to "its value as livestock forage grass also supports wild animals life, holds soil in place, maintains the productivity of such, keeps soil and water relationship in proper balance and helps guarantee stream flow or yields of water to underground channels, grasslands, moreover, have aesthetic, recreational and scientific values. To this extent, an area of land can be used for

many purposes simultaneously and sequentially and the multiple usage can equally give multiple yield". The most important fact is to first of all take many values of grassland into consideration before a decision is made to use a grassland for whatever purpose(s).

What is Reservation? Reservation is another very important concept in conservation. A forest that has been burned and cut can with care, regenerate itself. For instance areas that has been mixed or excavated and left barren can be regenerated with some measure of money and human effort directed towards achieving this goal. In addition, depleted animals forest recovers their former abundance life in their habitat if suitably and adequately protected.

However, the restoration of natural vegetation will no doubt depends largely upon the ecological process of succession where plants with varying degrees of tolerance to extreme conditions in an environment invade a barren area and replace each other in a succession role until a stable, self perpetuating ecological community is attained, Restoration system can be applicable where species are highly protected and genetic diversity of life is sustained. Conclusively, extinction of species of a particular animals or varying plants will make then restoration of past conditions become impossible.

With the above discussion, restoration, rationalization and multiple use of natural resources are very important concept in the study of conservation.

#### **4.0 Conclusion**

The knowledge of conservation as a key concept in mootng the idea of protecting and developing environment for enduring sustainability can not be over looked in this course of study. This is simply because the entire law of environment is basically centered on conserving and restoring the environment.

#### **5.0 Summary**

In this Unit, we studied introduction, meaning and concepts of conservation as one of the key principles in Environmental law.

#### **6.0 Tutor Marked Assignment**

- i. What is conservation?
- ii. What do you understand by the term Concepts of Conservation?
- iii. Is restoration the same as Conservation?

**7.0 References and Further Readings.**

1. <http://www.klg.co.uk/khadrun/publications/pdf/746.pdf>
2. Okorodudu Fubara M. T. (1998): Law of Environmental Protection, Caltop Publication (Nigeria) Limited, Ibadan.

**UNIT 2****HISTORICAL PERSPECTIVE OF CONSERVATION****Table of Contents**

1. Introduction
2. Objective
3. Main Content
  - 3.1 Historical Perspective of Conservation
    - 3.1.1. Early Age Conservation Practices
  - 3.2 Middle Age conservation practices
  - 3.3 Conservation in the 19<sup>th</sup> Century
  - 3.4 Conservation in the Millennium Age
  - 3.5 Conservation problems and New Approaches
4. Conclusion
5. Summary
6. Tutor Marked Assignment (TMA)
7. References/Further Readings

**Introduction**

The history of the concept of conservation is discussed in this unit stage by stage. Each stage shows the historical perspective of conservation by each level of development up to the present millennium age. The practices of conservation shall be itemized and discussed sequentially.

**2.0 Objectives**

At the end of this unit, the students should know:

- i. The history of conservation from one stage of development to another. That is
  - (a) Early Age conservation practices
  - (b) Middle Age conservation practices
  - (c) Conservation in the Millennium Age
- ii. Conservation problems and the way forward i.e new approaches to the concept of conservation.

### **3.0 Main Content**

#### **3.1 Historical perspective of conservation**

##### **3.1.1 Early Age Conservation Practices**

It is not a gainsaying that the early man or human species has lived by hunting animals and gathering of various types of fruits. It is remarkable to note that people acquire and pass on through oral tradition the amount of knowledge about the plants and animals with which they associate and on which they depend. Therefore, it is on record that, a number of breakthroughs achieved in the field of modern medicine in recent time shows that people acquire knowledge and pass on through oral tradition substantial idea about the plants and animals with which they associate and on which they rely upon. One of these landmark recorded in the modern medicine, for instance, have come from observing the therapeutic uses that traditional tribal cultures make use of different wild plants.

Nevertheless, 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 the 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. In some Asian countries, homelands of Western agriculture, there is widespread evidence of serious soil erosion during ancient time. However, destruction of vegetation and the spread of deserts followed the rise of early urban civilizations in many areas of the middle East and North Africa.

#### **Self Assessment Test**

Briefly trace the history of early conservation practices in Africa.

##### **3.1.2 Conservation practice in the Middle Age**

In the early civilization, some conservation practices were developed. During this period, 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. From

scriptures, the Holy Bible story is occupied with different injunctions governing the use of land and resources that have a conservative functions.

The kind of civilization of Incas, Phonicians and Israelis developed sophisticated methods of terracing to protect soil erosion on hills and mountain sides, making use of rocky areas and making effective use of water for irrigation purposes.

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.

As the wind of civilization continue to blown, human beings tends to increase in their knowledge especially on how to preserve and protect their environment. Such experiences led to increasingly sound land –use practices, evidence of most of these practices were found in the Roman agricultural records. This idea was cultivated in the well organized irrigated fields and gardens during the pick of Islamic/Muslim culture. 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 can not 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. It is essential to note that the period before industrializations, the general idea of presenting wild nature was not the concern of anybody because it was the conception of man that wild nature was as vast inexhaustible relative to the domain, the numbers and the power of human beings. This was very true at the time under review because the 500 million people who lived in the world in 16<sup>th</sup> century could not be said to have energy sources or well wither and the machinery to effect and impact great environmental changes. Then, most of the parts of world's surface was sparsely settled.

### **3.3 Conservation in the 19<sup>th</sup> and 20<sup>th</sup> centuries**

With the voyages of discovery by the European sailors along the coastal areas outside European nations particularly to the continent of Africa and other parts of the globe in the 15<sup>th</sup> Century, was a landmark in the mission to spread European culture all over the globe. Before the close of 17<sup>th</sup> century, Europeans were already armed with navigation equipment coupled on increasingly powerful technology and equally rekindled ability to modify large areas of the earth and to subdue less aggressive people. At this time, the attitude of explorers and colonialists were oriented more

toward immediate personal aggrandizement of the lands they discovered and settled than towards any concern for the long – term health and productivity of the discovered new world.

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.

At the same time, different conservation practices and ideas were being promoted. It is on record that forest conservation, for instance, developed sound beginning in 17<sup>th</sup> century England, Germany and France in one part as a result of exhaustion of natural forests due to increasing request for woods fuel for industrial uses. For example in the middle of 18<sup>th</sup> century in the North America, some great men, such as Thomas Jefferson already had very great ideas for land management and conservation concern for wildlife development.

The 19<sup>th</sup> century culminated into severe environmental degradations 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 a 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.

However, in the North America, the changes were mostly dramatic. This is because, the great herds of wildlife that were found in the plain and prairies vanished as the numbers of bison, elk, antelope, pud deer were nearly exterminated and other varieties such as bear, cougar, grizzly and wolf were later became extinct. The birds were not spared and were reduced from abundance to poor fractions. For example, the passenger pigeon Carolina parakeet and health hen were completely wiped out. This menace of over hunting equally affected nature of luxurious forests of New England, the South and the States surroundings the Great Lakes. Most of the grasslands were overgrazed in such areas like California native vegetation was eliminated and sent to oblivions over its range and thereafter replaced by species of European and Asian origin. It was the same story in India and West Indies and other Islands all over the globe. In some parts of the world, the changes were not too felt, as a result of conservation oriented mechanism of land management.

**Self Assessment Test**

Trace the great extinction of the nature wildlife in the 19<sup>th</sup> Century.

3.4 Conservation in the Millennium (21<sup>st</sup> 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. In 1822, a United State of America artists and author, Mr. George Catlin was the first to proposed the ideas of national parks encompassing vital areas where India and wild country could both be preserved. At the same period, William Bartram, a Botanist and the Ornithologist John James Anudubon were arousing an interest in wildlife and its conservation. Many authors in the same vein presented strong arguments concerning the importance of the continue survival of wild nature to the psychological well being of mankind. Among them Henry David became the pioneer literary advocates of wildeners conservation .

With the above fact, the first text book on conservation entitled ‘Man and nature was written by George Perkikins Marsh in 1860s. The US Congress lend voice to the Police in 1872 when it proclaimed the YELLOWSTONE region of Wyuming as a national park and equally established for the first time a national – government role in the protection and administration of the areas. As a result, in 1891, the US established the first forest reserves, this system of national forests, was proclaimed in the area around Yellowstone national Park.

President Theodore Roosevelt played a pioneer role in conservation to become a national movement and his advisers, president’s Chief Forester, Clifford Pinchot is credited with having first used the term ‘conservation’ in its present context. He championed the advocate of utilitarian ‘wise use’ approach to conservation.

In the present history, conservation has been marked by a great explanations especially government activities in presenting the environment and development of public interest in and support for this progress.

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.



In the United States of America for instance, the conservation of wild life become 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.

In addition, firm control over the management of lands as a result of disastrously overgrazed and that many privately owned farmlands had been totally or partially depleted or exhausted. However, Federal intervention to establish soil conservation on privately owned lands were accepted an appropriate roles the national government and the other tiers of government must not fold their arms. It requires joint efforts of both the governments at all levels, individuals and non-governmental organization.

### **3.4.2 Acceptability of 20<sup>th</sup> and 21<sup>st</sup> Conservation Practices**

The wide spread of conservation practices in this era of millennium development and the rate of acceptability by those countries that had experienced or witnessed sudden environmental changes. In a nut shell, by the tail end of 1920s national parks were to be found in nooks and crannies of all continents. For instance Russia (USSR) established the first of its now extensive system of natural reserves in 1924.

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. It will be on record that, the scientific basis for the management of natural wild grazing land for the sustainable production of forage for livestock and its allied was established in its national forests in 1913. It was within a short period, it had spread across the countries of the world.

Furthermore, in 1933, Aldo Leopold in the U.S wrote a text book on the ‘game management’ where the concepts of conservation and management of natural animals life for recreational purposes specifically for sport hunting, fishing and for direct commodity values on a sustainable basis received attention. This work was the advanced stage of the earlier studies of animal ecology written by Charles Sutherland Elton in England.

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.

### **Self Assessment Test**

Trace the history of conservation and management in Europe and United States of America.

### **3.5 Conservation Problems and New Approaches**

Shortly after the World War II, the conservation management techniques that was being used before this time became highly inadequate and insufficient to meet the environmental demands as a result of growing populations and increasing pressures on land and resources. The problems are enumerated as follows:

- i. The synthetic pesticides and the insecticides DDT were discovered that the dual mechanisms had unexpected and severe consequences on the environment. As a result, the application of the pesticides anywhere for any purpose by 1970s was no doubt open to serious debate.
- ii. Pollution became a major problem as populations and industrial activities increased after the end of second World War in major cities. Toxic and water contamination became the order of the day. Nuclear radiation generated from radioactive materials sourced from test explosions of atomic and hydrogen bombs which was built by the two World powers, the NATO and SEATO organizations in the 1950s and 60s spread throughout the entire biosphere instead of limiting it to immediate environment where the tests were conducted.
- iii. The problem of the environment became international in scope. In this wise, the ocean became highly polluted and no country in the present world could control the trend.
- iv. Conservation costs money: one constant feature of the environment is that it is always changing. Nothing stays the same and conservation is, therefore a different and expensive business. Changes created by man and machine can be stopped if really necessary, but changes caused by the natural process of weathering erosion and slow evolution of planet Earth cannot be stopped. However, the costs involved in conservation are apparent in every neighbourhood, and the money is not only spent on things of special significance.

#### **3.5.2 New Approaches**

Having identified the above problems confronting conservation, and in response to the need for a much more integrated approaches to environmental problems and to natural resource managements that existed at the time, many countries established ministries, departments and agencies for the environment or their equivalent. This followed in 1969 by the National Environmental Policy Act enacted by the USA which established a National Council on Environmental Quality to oversee and help coordinate these activities of government departments that could have an effect upon the environment.

The new approaches to these problems led to many international conferences which were held and new treaties, agreements and conventions were proposed and the need for concrete regulatory power over the environment at an inter-governmental level was stated frequently. This development made the World Health Organization (WHO) and the World Meteorological Organization (WMO) begin a global program to monitor pollution level.

In 1980, International Union for conservation of Nature and Natural Resources with the support of UNEP and World Wildlife published World Conservation Strategy. Their document presented a world wide mechanisms for the rational use of resources, which has served as the basis for many national conservation programmes. As many nations in the United Nations are not willing to delegate or relinquish greater authority to international organizations and to support them financially, little progress were made toward finding lasting solution to global problems. As a result of the existing conditions of international relations, this left each nation to attempt to do what it could within its own boundaries and place.

In the post independence era till date, the objectives of conservation became highly internationalized. Most of the National Development Plans contained principles and policy statements relating to conservation of the nation's natural resources in furtherance of socio-economic development. However, nature conservation programmes and policies are implemented at the Federal level by the Department of Forestry and Land Resources in the Ministry of Agriculture, Water and Rural Development, the newly Federal Ministry of Environment and at the States level by the Ministries of Agriculture Water and Natural Resources and newly introduced States Ministry of Environment. Other public and private organizations involved in the implementation of nature conservation policies in the company management, heads of national parks, the National Tourist Board, the Nigerian Conservation Foundation, Nigeria Environmental Protection Agency (FEPA) which metamorphosed nomenclaturally to National Environmental Standards and Regulations Enforcement Agency (NESREA) with the motto: "To ensure a cleaner and healthier environment for Nigerians". NESREA is majorly expected to play a significant role, coordinating the activities of all these departments, parastatals, groups involved in nature conservation and protection in Nigeria. The reality of environmental protection in Nigeria became a national issue after the Koko Toxic Waste Dumped in 1988 and since then, both the Federal and the States inclusive of the Local Councils in the Country have been making frantic efforts to reduce the menace of environmental problems.

And apart from the above, another best approach to overcome these problems identified is to slow down these natural processes of change and decay. The best way to overcome one of these problems is to slow down these natural processes of change and decay by careful maintenance and repair.

#### **4.0 Conclusion**

In this Unit, you have learnt the meaning of conservation, the categorical era of the development of conservation in the entire globe, the problems bedeviling the concept and the new approaches to the identified conservation problems.

#### **5.0 Summary**

From the above discussion, you have been able to know some key concept of conservation vis-a vis historical perspective and identified problems and the likely solutions.

#### **6.0 Tutor Marked Assignment (TMA)**

- i. List the conservation activities taking place in your State or Local Council
- ii. Identify problems of conservations in your country and recommend likely solution to the problems
- iii. Briefly discuss the historical origin of conservation.
- iv. Discuss the efforts made by your country to enforce international convention on conservation of your country's nature-resources.

#### **7.0 References and Further Readings**

1. Okorodudu – Fubara (1988) Law of Environmental Protection
2. John Bentley and Bill Charlten (1983) Finding Out About Conservation Batsford Academic & Educational Ltd, London
3. National Environmental Standards and Regulations Enforcement Agency (NESREA) Report of the First national Stakeholders' Forum on the New Mechanism for Environmental Protection and Sustainable Development in Nigeria 22 – 23 . October 2007, Abuja, Nigeria.

## UNIT 3

### IMPORTANCE OF CONSERVATION

#### **Table of Contents**

- 1.0. Introduction
- 2.0. Objective
- 3.0 Main Content:
  - 3.1 Importance of Conservation
- 4.0. Conclusion
- 5.0. Summary
- 6.0. Tutor-Marked Assignment (TMA)
- 7.0. References/Further Readings

#### **1.0 Introduction**

Conservation is the protection and preservation of plants and animals. This fact is corroborated by the Wildlife and Countryside Act 1981 which repeals and reenacts with enactments previous legislation. This enactment relating to the protection of some wild animals, nature conservation. It also covers National Parks, Public Rights of Way and related topics. This concept of conservation is synonymous to human survival in his entire world or environment. Conservation is the protection of the natural environment. The Official protection of buildings that have historical or artistic importance. The act of protecting nature/something from being lost, wasted, damaged or destroyed.

It is the importance of this concept that is the main core of discussion in this unit.

#### **2.0 Objectives**

At the end of this unit, you should know:

- i. The importance of Conservation
- ii. Conflicting human attitudes and issues
- iii. And application of global natural resources

#### **3.0 Main Content**

##### **3.1 The importance of Conservation**

The value of this concept to mankind cannot be over emphasized. It is so essential to human existence and survival. In other words, human survival and continuity on earth depends largely on how he can preserve and protect the nature –resources of his environment.

It is no doubt that 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 and which are recycles to help maintain the fertilities of soil, many of the elements that contributes to the proper functioning of the biosphere have not yet been identified. As a result, man lives with such environmental uncertainties, an attitude of care and protection towards the earth's living resources is inevitable.

### **3.1.1 Prevention of 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 accumulation of sulphur dioxide in the air of London during the 1950s resulted to many deaths that would have been prevented. Dumping of Mercury containing wastes into the rivers in Japan caused death of many people and hindered the health of many others, the dumping of toxic wastes in Koko, Delta State and Ilgbon – Iyana Offa, Ibadan, Oyo State, Nigeria which claimed many lives.

### **3.1.2 Economic Importance**

It depends on the way individual or group look into conversation, it may be a little difficult to determine the degree of its economic values. But, if one viewed it from the perspective of human sustainability and survival, the economic importance of conservation may be rarely demonstrated. Nevertheless, 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.

The economic importance of conservation can be appreciated from the two interest angles: that is Long term interests and Short term interests. The conflict in the economics of conservation results from the difference between the two interest of groups of all mankind.

#### **i. The Long-Term Interest**

The long-term economic community benefits to be derived from stable and productive farmlands and forests are considerable when compared with farms

that are exploited, eroded and abandoned or with forests that are cut, burned and allowed to deteriorate. Whereas,

ii. Short –Term Interest

Short-term economic considerations or interest may lead individuals or communities to exploit their farms and forests for maximum profit at minimum cost and then move on, leaving the deteriorated lands behind.

### **1.3 Aesthetic and Recreational Value**

It is no doubt, wild nature is one of the sources of aesthetic pleasure and the use of wild lands and wild-animals resources for recreational enjoyment. This value have long been recognized as among the more important values of conservation. Fishing, hunting, boating, swimming, boat racing, sunbathing, skiing and picnicking which are grouped among the outdoor based recreational activities are related to 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, because they may 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 increases.

#### **3.1.4 Scientific Value**

One of the vital areas of importance of conservation is 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, there are many field plants and animals with undiscovered scientific values. This is because each wild plant and animals contains a storehouse of genetic and biochemical information, the loss of a single specie might cause the loss of information that could ultimately have great value for mankind's welfare and survival.

### **4.0 Conclusion**

Conservation is generally applied to habitats, landscape or raw materials which need management to ensure their continued existence. It also means the controlled use of things which are themselves growing or subject to change, like soil, forests, games or wildlife habitats and human landscapes. The importance of conservation was equally discussed extensively.

## **5.0 Summary**

In this unit you have learnt generally the values contains therein under the main topic. That is, the essential importance of conservation.

## **6.0 Tutor Marked Assignment (TMA)**

Conservation is relevant to the study of environmental law. Discuss the values its possessed that made it inevitable to this study?

## **7.0 Reference Books/Further Readings**

1. John Bentley and Bill Charlton (1983): Finding Out About Conservation. Batsford Academic and Educational Ltd London.
2. Hannby A. S. (1984): Oxford Advanced Learners' Dictionary of Current English 7<sup>th</sup> Ed. P 309 QUP. London.



**UNIT 4**  
**LAW AND POLICY GUIDING CONSERVATION OF NATURAL**  
**RESOURCES IN NIGERIA.**

**CONTENTS**

- 1.0 Introduction
- 2.0 Objective
- 3.0 Main Topic
  - 3.1 Law and Policy guiding Conservation
  - 3.2 Land Reserves
  - 3.3 Water Reserves
  - 3.4 Air Reserves
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (TMA)
- 7.0 References and Further Readings.

**1.0 Introduction**

Laws and policy are inevitable concernment to the preservation/conservation of natural resources in Nigeria. From the global perspective, law made the agreement reached in various environmental conferences enforceable and implementable among the signatories to such intervention policies and programmes. The idea of conservation – sustainability development we are discussing meant national policies and programmes that surpass the development of the current generation to that of unborn generation by making sure all the natural resources are judiciously utilized such as land, water, forest, air and wildlife resources mainly for the enjoyment of the existing and the on-coming generations.

**2.0 Objectives**

At the end of this discussion, you should be able to:

- Analyse law and policy of conservation of natural resources in Nigeria
- The types of interests as it affects the natural resources. That is, water, air, land, wild life and forest.
- The strategies for achieving the protective measures

### **3.0 Main Topic**

#### **3.1 Law and Policy guiding the conservation of Natural Resources in Nigeria.**

No nation can exist in isolation, therefore all nations in the community of world organization have to develop and grow in line with global trends. The present state of the world have shifted from the state of mere development to 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. This can be achieved through proper utilization of the land, water, wildlife, forest and air resources for the interests of the current and incoming generations to a greater extent. Law and policy have made great impact toward holistic objective of nature sustainability through concept of conservation. These various resources shall be enumerated one after the other.

#### **3.2 Land Resources**

Land of all other classes such as Air and Water is the most important to man because of its support for major terrestrial life and a source of many natural resources that sustain man. The misuse of land in this case can have harmful impact on the environment and co-existence of man. Without gainsaying the existing law on land, policies are very crucial to the conservation of land resources.

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. As of laissez-faire attitude towards land, the military administration in reviewing the old trend, adopted a trusteeship concepts of land tenure for the country. As a result all land comprised in the state, with the exception of Federal land, are vested in the Military government of each state in trust to administered for the use and common benefit of all Nigerians. One of the principle governing this land decree is that citizens are only allowed right of occupancy over the land. The principle of maximum interest in land expressed here is dependent on four fundamental concepts:

1. Security of tenure dependent on Land Use, failure to develop the land may result in forfeiture of the right.
2. Restraints on alienation
3. Rights subject to "Overriding" public interest and
4. Appropriate compensation for unexhausted improvements.

One spectacular 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.

Wabara posited that “in the absence of an all embracing land resources conservation law or policy, 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 objectives 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” The strategies for achieving this are expressly set out in the Agricultural Policy for Nigeria as follows:

1. In the interest of the generality of farmers, Government will ensure that no single individual or organization will be allowed to acquire more than 2,000 hectares of land.
2. To complement government efforts in arid zone, afforestation, soil survey and land evaluation, erosion control, soil fertility survey and assessment, and the establishment of an earth resource data centre, government will enlist the assistance of private companies and international organizations to combat the harsh effects of these natural disasters.
3. Appropriate measures will be taken to mobilize and educate the public in the control of land degradation generally.
4. Government will ensure that a continuous inventory and assessment of land resources is carried out so as to put them into their optimum use and monitor changes in their potentials for agriculture.
5. Government will enact legislation to control the quality of agro-chemicals including fertilizers as well as physical factors in order to protect it against degradation and pollution.
6. Government will encourage training in land management and conservation in all post primary educational institutions to meet the man –power needs in land resources, sciences and arts.
7. Land management committees will be inaugurated in all states of the federation to advise on agricultural land use.

Apart from the above stated, several attempts have been made to control the problems of deforestation and desertification through the enactment of appropriate legislations. These problems are caused mainly by the haphazard spread of agriculture, commercial timber felling, 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.

International treaty obligations mounting pressure from the adverse consequences of threatened extinction of the nation's wildlife and endanger species led to the enactment of more protective statutes for the fauna resources. This treaty was in 1974 ratified by the Nigerian Federal Government entitled 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. In 1977, Nigeria and Cameroun with Niger Republic ratified an agreement in the Joint Regulation of Fauna and Flora on the lake Chad Basin.

This led to 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. All these are landmarks in the field of final and lasting solution to the problems facing natural resources and life.

### **3.3 Water Resources**

As far as water resources is concerned, Nigeria Federal Government has made a landmark in making outstanding legislations in an effort to protect waters and aquatic resources from adverse effect of misuse and partial neglect in comparison with the other natural resources within the natural surrounding. Water resources development is an importance consideration in the Agricultural Policy 1988. The government plans in the Policy program are:

- a. To undertake a comprehensive development to both underground and surface water resources for multipurpose use.
- b. To undertake schemes for control of erosions or flood.

- c. To construct and maintain dams, dikes, polder wells, boreholes, irrigation and drainage systems and other works necessary for food production and human water needs.
- d. To provide water from reservoirs and lakes for irrigation purposes to farmers and other groups of people as well as for urban water supply schemes.
- e. To control the pollution of rivers, lakes, lagoons and creeks in the country and
- f. To assist in the development of fisheries and improve navigation on the rivers, lakes, reservoirs, lagoon and creeks in the country.

These objectives was replicated by the National Policy on the Environment 1989 in line with water resources management.

In 1989, the National Policy on the Environment, made proposition for the use of river basin concept for water management, control of point and non point sources of pollution, conservation and improvement of water quality conditions and ecological systems of the water bodies for fishes and other fauna and flora.

Few principles governing conservation of nation's water which have been legislated into law at Federal and State levels (i.e Act and Laws)

1. 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.
  - i. Undertake comprehensive development of both surface and underground water resources for multi purpose use, specifically the provision of irrigation infrastructure and the control of floods and erosion and water shed management.
  - ii. Construct, operate and maintain dams, dikes, polders, walls, boreholes, irrigation and drainage systems
  - iii. Supply water from the Authority's completed storage schemes to all users for a fee and
  - iv. Develop and maintain up-to-date comprehensive water resources master plans, identifying all water resources requirements in the Authority's areas of corporation through adequate collection and collation of water resources, water use, socio-economic and environmental data of river basin.

Each state promulgated a number of statutes to deal with water pollution control. Few relevant statutes made by the federal government are:

- i. The Nigerian Criminal Code, which specifically prohibit the fouling of water and equally prescribes punishment of six months imprisonment for an offender.
- ii. The oil in Navigable Waters Decree, 1968, prohibit 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 be in charge by the degree.
- iii. 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.
- iv. 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.
- v. Lagos State government made a provision similar to the above when it enacted the 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.
- vi. The convention on fishing and conservation of the Living Resources of the High Seas, 1958 which aimed at solving the problems involved in the conservation of the living resources of the hi gh seas, specifically, those relating to the threatened over exploitation of these resources through the development of modern techniques.

With all these, national environmental standards on water quality is now a legal requirement. The Federal Environmental Protection Agency (FEPA) 1988 repealed by the NESREA in 2007. This Law is responsible for the stablishment of water quality for the inter-state water of Nigeria to protect public health or welfare and enhance the

quality of water for the specified purposes in the Federal Environmental Protection Agency (FEPA) now NESREA 2007.

The water quality standards covers the following areas: the use and value of public water supplies, propagation of fish and wild-life, recreational purposes, agricultural, industrial and other legitimate uses. This simply means that Agency will establish different water quality standards to various different uses.

### **3.3 Air Resources**

The Air refers to earth's atmosphere and has therefore been defined as a mixture of gasses surrounding the earth, prevented from escape by the pull of the Earth's gravity breathed by all existing animals and plants in both lands and waters (Hutchington 75; Hornby p.19). 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.
- h. Setting up standards to minimize the occurrence of acid rains and
- i. Promoting regional cooperation aimed at minimizing the atmosphere transportation of pollutants across international boundaries.

To this extent, it is a crime under the Criminal Code for any person to impair the quality of the atmosphere anywhere thereby resulting to noxious which endanger human health or to spread in the air any substance or disease dangerous to human and animal life. This is one of the oldest statute in the country till date to secure the atmosphere from being polluted or contaminated.

In a similar vein, the FEPA/NESREA is to provide policy guidelines to maintain and securing air quality and atmosphere protection. The quality standard must be maintained to protect and sustain air resources. Section 15 of Lagos State Environmental Pollution Control Edict 1989 corroborated this by stating that:

1. No person shall discharge into the air any inadequately filtered and purified gaseous wastes, gasses containing substances injurious to life and property such as sulphur dioxide, oxide of nitrogen, hydrogen, sulphide, carbon monoxide, ammonia, chlorine, smoke and metallic dusts and particulates.
2. No person in the Lagos Metropolis shall burn or cause to be burnt refuse of any type, bush, weeds, grass, fires, table or waste of any description without first obtaining written permission from the Ministry.
3. All car assembling companies and automobile engineering firms in the state are to install exhaust air scrubbers as a standard design.

Apart from the power given to NESREA to regulate air standards in Nigeria, Nigeria is concerned with the protection of ozone which is currently a serious international issue in recent times.

In order to forestall and safeguard the ozone from being depleted and comply with the International Standards, the Agency needs to do certain things, in compliance with s18.

To undertake to study data and recognize developments in international force and other countries regarding the cumulative effect of all substances, practices, processes and activities which may affect the stratosphere especially the ozone in the atmosphere and the Agency can equally make recommendations in this respect.

Nevertheless, there are other global atmospheric problems apart from the ozone layer problems, induced by human activities, one of them is:

Transboundary movement of airborne contaminants which have also attracted the attention of the Federal government and were addressed in the National Policy on the environment.

#### **4.0 Conclusion**

Law and Policy guiding conservation of natural resources in Nigeria is very vital to the totality of the concept without which all effort put in place or proposed to be put in place may not see the light of the day. This is the backbone of the concept, all effort geared towards protecting and conserving land, rivers and air resources are enumerated for the benefit of researchers, students and interested readers.



### **5.0 Summary**

In this unit, we have discuss the law and policy guiding the conservation of natural resources in Nigeria. Mention was made to international efforts and the Nigeria government efforts based on implementation of International conferences and agreement on conservation. The states governments in Nigeria are not left out in making legislations to conserve and protect natural resources in their environment.

### **6.0 Tutor Marked Assignment (TMA)**

Discuss fully the efforts of both international organizations and Nigeria government towards sustaining our natural resources.

### **7.0 References and Further Readings**

- i. Land Use Act 1978
- ii. Wabara
- iii. Humanitarian Encyclopedia
- iv. Hornby A. S. Oxford Dictionary
- v. John Bentley and Bill Charlton

**MODULE 4**  
**ENVIRONMENTAL POLLUTION CONTROL AND MANAGEMENT**

**UNIT 1**  
**HISTORICAL, NATURE AND MEANING OF POLLUTION &**  
**ENVIRONMENTALISM**

**CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Historical, Nature and Making of Pollution
  - 3.2 Environmentalism
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (TMA)
- 7.0 References and Further Readings.

**1.0 Introduction**

The advent of industrial age popularly called 'Industrial Civilization' has led to an explosive growth of industries including the hazardous ones. These industries have not only exploited the natural resources to their optimum but the discharge and emission of toxic effluents and emissions from hazardous industries have also polluted the surrounding environment. However, 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 releases into the environment.

In addition, the global environment is also being threatened by the problem of acid rain, ozone layer depletion and climatic modification. All these have devastating effects all over the world. The release of multi billion of tones of carbon dioxide, methane and chloro fluorocarbons into the air causes chemical imbalances of natural cycles, which may eventually result in global warming, new deserts, melted ice-caps and flooded cities (Gidding Calving 1973).

## **2.0 Objectives**

The main objective is to make sure that at the end of this discussion, the learners are able to know:

- (i) The historical perspective of pollution
- (ii) The various meanings of pollution
- (iii) The concept of environmentalism

## **3.0 The Main Contents**

### **3.1 Historical, Nature and Meaning of Environmental Pollution**

Before the discussion on various meanings of the pollution by different authors on the concept, there is need to briefly discuss the role of international conferences viz environmental pollution.

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 K 1990 – 171 – 2)

It is unfortunate that, this area of environmental studies has not been given adequate attention by many developing countries, although, their actions may be due largely to ignorance on the parts of government and people as to its relevance. The conference stated as follows:

In developing countries, most of the environmental problems are caused by under development. Millions continues to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation.

Subsequently, in 1992, the UNO's Earth Summit in Rio de Janeiro 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.

In this part of Africa, environmental problems particularly in Nigeria only came to the limelight after the dumping of toxic waste in Koko, Delta State in 1988. This was corroborated in an article written by P. Smith and A George entitled "The Dumping Grounds No 94" South Magazine. It was 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 1989, the Government issued official gazette on National Policy on the Environment.

However, this Modus and all its units intend to examine pollution and its associates problems.

### **What is Pollution?**

Pollution is the process of making air, water, soil, land etc dirty; the state of being dirty; what is annoying or harmful levels of noise or artificial light at night (Hornby A. S. 1984: 123).

Pollution is assumed to be a relative concept because although almost no substance exists in pure state, it is only when the impurities 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 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). (Hutchington 1992: 834). 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. For instance in 1990, the United Kingdom had failed to apply 21 European Community Laws on air and water pollution and faced prosecution before the European Court of Justice on 31 of the 160 EC directives in force.

The existence of 1,300 toxic waste tips in the UK in 1990 posed a considerable threat of increased water pollution. Pollution of the environment 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. Also in respect of pollution from waste on land, the Environmental Protection Act 1990, S29(3) (Osborn Law, 1993: 252).

The Federal Environmental Protection Agency Act defines environment as including water, air, land and all plants and human beings or animals living therein and the inter-relationship which exist among these or any of them. To this extent the environment therefore constitute the basic necessity for human existence. It is no gainsaying the environment is the core of man’s existence on planet earth, anything

that affects it must invariably affect the quality of his life. Technology, population, urbanization and poverty factors which have their impact on the environment.

No wonder, 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.

Hitherto, there has been some definitions of pollution, advanced since 1924 at a conference of the International Law Association “Pollution” of the sea was defined as “an act whereby the inoffensive use of the water becomes impossible either for animal life or human use or create a danger to such life or such use”. 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. UNO conference in 1972 at Stockholm defines pollution as “The discharge of toxic substances and the release of heat, in such qualities or concentrational as to exceed the capacity of the environment to render them harmless” Another definition. “Pollution” means the introduction by man, directly or indirectly of substances or energy into the environment resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystem, and interfere with amenities and other legitimate uses of the environment.

Moreover, one of the major causes of pollution is the prospecting activities of oil companies. The effects and problems of oil pollution are now well known. This led the Federal Government to inaugurates new board for oil spillage. The Governing Board for the National Oil Spill Detection and Response Agency (NOSDRA). The main function is to overseas the detection and clean up of spillages in oil producing communities in the Niger Delta region. The Minister in charge, Mr. John Odey said the board would intensify the remediation activities in communities that had been severely devastated by oil spillage.

According to Hodge, pollution is the introduction of substances or energy liable to cause hazard to human health, harm to living resources and ecological system, damage to structure or amenities or interference with legitimate use of the environment.

There are various kind of pollution. Some pollution can be differentiated on the basis of the nature of the pollutants. A pollution is a physical agent which if found in excess amount alters the liquidity of the environment adversely. It may be a solid waste,

radioactive waste from nuclear plants, heat from thermal plants, gaseous pollutions such as carbon monoxide, SO<sub>2</sub>, NO<sub>2</sub> etc. metal and other organic and inorganic compound. For instance, thermal pollution is the rise and fall in the temperature of a natural body of water caused by human influence. A common cause of thermal pollution is the uses of water as a coolant by power plants and industrial manufacturers. Elevated water temperatures decreases oxygen level which can kill fish and affects ecosystem composition, such as invasion by new thermophilic species. Urban run off may also elevate temperature in surface waters. Thermal pollution can also be caused by the release of very cold water from the base of reservoirs into colour rivers. These cause the different types of pollution such as air, water and land pollution etc.

In Nigeria, one of the major causes of pollution are very well known. Omorogbe Y. 1993 p 15. "It is not new when the Federal Government set up a board to address the problems of pollution in the Niger Delta area".

Osibanjo (1989, 128) in his own view: "one of life's most poignant paradoxes must be that man's progressive activities pose the most potent dangers to his ecological environment and thus his continued existence. The vibrant centres of industrial and technological activities providing physical and cerebral stimulation along with economic likelihood are also the source points of hazardous effluents in all state of matter"

Oil exploration generally has produced increased environmental hazards. For instance, Roads are constructed through farmland, the water is polluted, gas flares causes noise, heat, destruction of farm produce and land itself. Incurable damages are caused to environment by oil spill accidents which led to the death of marine and terrestrial organisms, disturbance of the ecosystems resulting in socio-economic disequilibrium. It is unfortunate that oil prospecting caused environmental damages, but its sales provide a major source of revenue for the country and made the country a prone member of the prestigious Organization of Petroleum Exporting Countries (OPEC).

As a result of the sweet and bitterness of crude oil prospecting, the law have to strike a balance / an equilibrium between the forces of degradation and environmental protections (Osipitan).

## **ii. Environmentalism as a Concept**

The environment as a concept is synonymous with the origin of man. Man cannot be separated from his environment. They are inevitable concomitant to each other.

However, man quest for food, shelter and clothing has contributed to his altering this natural environment. The environment can be defined as follows:

Osborn posited that it consists of all the following media, namely, the air, water and lands and the medium of air includes the air within buildings and the air within other natural or man made structures above or below ground. In the view of Hutchinson, environment is the sum of conditions affecting a particular organization, including physical surroundings, climate and influences of other living organism.

In addition, it is the totality of physical, economic, cultural, aesthetic and social circumstances and factor which surround and affect the desirability of value of property and which also affect the quality of life of people's lives (Black Law Dictionary 6 ed).

The FEPA particularly in S 38 of the Act defines environment as water, air, land and all plants and human beings or animals living therein and the interrelationship which exist among these or any of them.

At this juncture, the interaction within the natural environment and man's interference with this led to the pollution of the natural settings of the environment.

Pollution can be defined as man made or man achieved alteration of chemicals, physical or biological quality of the environment beyond acceptable limit. Pollution occurs on land, air or water.

FEPA Act defines pollution as: man made or man aided alteration of chemical, physical or biological quality of the environment to the extent that, it is detrimental to that environment, or beyond acceptable limits. (Ola C. S. 1984 p1).

However, any undesirable change or alteration in the natural characteristic of the environment in any state of matter is pollution. In the same vein, Environmental Pollution is defined as the introduction of any substance in such characteristic and for such a duration as to produce a deleterious effect on all living things in an area in terms of their viability, relative abundance, health, morality etc.

As a result, there are many strategies put in place to curb environmental pollution by national governments all over the world, many institutional frameworks and measures have been taken to protect the environment from the activities of man through conferences, workshops, treaties and laws.

#### **4.0 Conclusion**

The use and discharge of hazardous substances have contaminated the air, water and land by the activities of man, rendering the environment more and more unfit for healthy living within and outside the industrial establishment. All the warranted changes and alterations in the natural environment will definitely result in pollution of

the natural environment. To cut this upsurge of environmental pollution, countries all over the world have by and large established institutional frameworks and measures.

### **5.0 Summary**

This Unit analysed the following:

- i. Meaning of pollution generally
- ii. Meaning of Environmental pollution
- iii. The Impact of national government and international organization
- iv. Man as causer agent

### **6.0 Tutor Marked Assignment (TMA)**

- i. Define Pollution?
- ii. Highlight the principle of environmentalism

### **7.0 References and Further Readings**

1. The Punch Newspapers April 29, 2010 p. 17
2. S 38 FEPA Act Cap – 1 of 1992
3. Mowoe K. (1990) Quality of Life and Environmental Pollution and Pollution in Environmental Laws in Nigeria including cooperation. Omotola ed. Lagos. University of Lagos 1990 @ 171-2
4. Hornby A. S. (1984: 123)
5. Omorogbe Yinka (1993) “Regulation of Oil industry Pollution in Nigeria in New Frontiers in Law, Arinse Ed. (Beni, Oliz Publishers p 147)
6. Osibanjo 1984 p128: Some Public Law Considerations in Environmental Protection in Environmental Laws in Nigeria including cooperation, Omotola’s ed.
7. Osborn’s Law Dictionary 1984



## UNIT 2

### TYPES AND SOURCES OF POLLUTION

#### CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content: Types and Sources of Pollution
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings.

#### 1.0 Introduction

There are many types and sources of pollution which can be differentiated on the basis of the nature of the pollutant. A pollutant is a physical agent which if found in excess quantity alters the quality of the environment adversely. It varies, it may be a solid waste, radioactive waste from nuclear plants, heat from thermal plants, gaseous pollution like carbon monoxide, metal and various inorganic compound. These and many others cause the different types and sources of pollution such as air, land and water pollution etc.

#### 2.0 Objectives

The main objective is that at the end of this unit/discussion, the student must be able to know:

- i. the types of pollution
- ii. the sources of all these types of pollution

#### 3.0 Main Contents

##### 3.1 Types and Sources of Pollution

There are three key major types of pollution, that is, land, air and water pollution. "It is surprising that deadly properties of some of the hazardous substances are little known to us in this part of the world. Allergies as well as damage to vital organs of human body, such as the eyes, brain, liver, kidneys and reproductive organs, malformations of unborn children and genetic disorders are attributed to these substances. Even the carcinogenic diseases are caused by these substances. Hazardous substances are, thus, understood to include any substance or preparation or its handling, which may cause harm to human beings and/or other living creatures,

plants, micro – organisms property or the environment. This is found in s 2 of the Environmental (Protection) Act 1986. The chemical, fertilizer and dyestuff industries use millions of litres of water and discharge pollutant rich in effluents. See s 2(k) of the Indian Water (Prevention and Control of Pollution) 1974 which defines “trade effluent” to include any liquids, gaseous or solid substance which is discharged from any premises used for carrying on any trade or industry, other than domestic sewage: causing havoc to fish, cattle and also to people residing in neighbouring areas. Thus, hazardous waste contaminate the environment and pose long-term risk to human health and life of other biota (Dharmendra S. Sengar, 2007, 13 & 14).

### **3.2 Water Pollution**

Water is needed for human and animal consumption and it is one of the most important industrial materials required in the manufacturing process and so, many industries are established around the water bodies. For the production of energy, food, fibre and industrial goods. (Dharmendra 2007, 14; Atsegbna et al 2004, 71) Water equally provides the cheapest means of transportation compared to other means, varieties of recreational activities can also be carried on in water. Having identified the above uses of water, it behoves that the marine environment and life should be protected, kept clean and safe from any form of pollution.

In addition, man is two-third water and the surface of the globe is seven –tenth of water. It is beside air the most single resource in use (Akande O. 1981, 1). 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 the 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.

Both effects are becoming increasingly common when this happens, water is said to have been polluted. Mismanagement of industrial effluents and indiscriminate domestic waste disposal have ruined especially the coastal water.

#### **What is 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 or

less fit for the purpose its unaltered form was used - the use being natural or artificial. Water can be said to be polluted when "it is altered in composition or condition so that it becomes less suitable for any or all of the functions and purposes for which it would be suitable in its natural state.

This alteration may take the form of changes in the physical, chemical and biological properties of the water. It may also take the form of the discharge of liquids, gaseous or solid wastes into the water.

The key major sources of water pollution are oil spills, industrial refuse/toxic waste and agricultural fertilizers.

### **3.2.1 Classification of Water Pollution**

#### **Water pollution can be classified as:**

- 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. If too much oxygen is removed and it takes too long for it to be restored, there may be serious pollution.
- ii. Pollution by heated effluents: Oxygen is readily restored when the water is cool. The hotter it is, the lower the Oxygen holden 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

### 3.2.2 Causes of water Pollution

- a. The contaminants which result into pollution in water include a wide spectrum of chemicals, pathogens and physical or sensory changes such as elevated temperature and declaration. Most of these chemicals and substances that are regulated may be naturally occurring (Calcium, Sodium, Iron, manganese etc, the concentration is often the key in determining what is a natural component of water, and what is a contaminant .
- b. Oxygen –depleting substances may be natural materials, such as plant matter like leaves and grass as well as man – made chemicals. Some other natural and anthropogenic substances may cause torpidity which tend to blocks light and disrupts plant growth, and clogs the gills of some fish species.
- c. Chemical substances are source of toxic for instance, pathogens produces waterborne diseases in either human or animal hosts.
- d. Surface water and groundwater pollution sources are generally grouped into two categories based on their origin namely point source pollution and non – point source pollution. That is, point source (PS) pollution refers to contaminants that enter a water way through a discrete conveyance, such as a pipe or ditch e.g discharges from a sewage treatment plant, a factory, or a city storm drain. The US Clean Water Act (CWA) defines point source for regulatory enforcement purposes, while the Non-Point Source (NPS) pollution refers to diffuse contamination that does not originate from a single discrete source. NPS pollution is often a cumulative effect of small amounts of contaminants gathered from a large area Nutrient run off in storm water from “sheet flow” over an agricultural field or a forest are sometimes cited as examples of NPS pollution. Contaminated storm water washed off of parking lots, roads and highways called urban run off, is sometimes included under the category of NPS Pollution. Nevertheless, this runoff is typically channeled into storm drain systems and discharged through pipes to local surface waters and is a point source. The CWA in 1987 defined a Point Source as amended to include municipal storm sewer systems, as well as industrial storm water, such as from constructions sites.

### 3:2:3 Effects of Water Pollution

#### Water borne Infections Diseases

Water –based diseases are somewhat similar to water –borne diseases but are not typically an effect of water pollution. They come from infectious agents that naturally spend part of their life cycles in water. Human can become infected when they drink

or come in contact with the water that serves as home to these organisms. One of the most widespread examples in this category is schistosomiasis, which currently infects 200 million people in 74 countries. In the same vein, diseases like malaria and dengue fever are spread by insects that breed or feed near water.

However, human infectious diseases are among the serious effects of water pollution particularly in developing nations of the world, where sanitation may be inadequate or non existence. Among the most serious parasitic diseases are amoebiasis, giardiasis, ascariasis and hookworm.

Developed countries are not immune to problem of infectious water borne diseases. The WHO estimates that as much as 80 Percent of all diseases in the world are associated with water. WHO says that one hospital bed out of four in the world is occupied by a patient who is ill because of polluted water. According to WHO's report, not less than 25 million people die every year in developing countries from water borne diseases.

In 1993, high cryptosporidium levels in Milwaukee's drinking water supply sickened more than 400,000 residents. This was unusually an extreme case, but transmission of disease agents such as bacteria and cysts via contaminated but poorly treated municipal water is more common than it should be. On yearly basis, an estimated seven million Americans are sickened by contaminated water.

1. **MERCURY POISONING** has been found to have lethal effect. It can cripple and kill the present generation and the future generation if effected through its chronic accumulation in human brain and nervous system. In accordance with 89 report of Committee on Petition presented in the Rajya Sabha on May 08, 1986, certain bacteria convert the insoluble mercury into soluble, which is absorbed by living organisms. Mercury, thus enters the food chain and the dead fish, dying plants, poisoned livestock, paralysed human beings and infirm children make up the toxic cycle. For example, due to use of toxic water polluted by industrial effluents, the limbs of farmers are slowly being deformed. There is every tendency that the genetic problems might arise if they continue to use the water for 10 to 15 years (Dharmendra 2007. P 14 & 17).
2. **ARSENIC POISONING** has adverse effects. It causes korotosis, a skin disease, and severe liver damage. The level of arsenic in samples of drinking water taken from Behala Calcuta in 250 times the amount permissible by the World Health Organization.

3. OIL SPILLS equally result in health hazards to human beings and can also cause fire outbreaks, constituting extensive damage to life and property. In Nigeria for example, between 1976 and 2006, over 100 million gallons of oil spilled into the Nigeria environment especially the marine environment. (Lawrence Atsegbua 2004, P 73 & 74).

There were report of thousands of beach choosing in the United States and outdated monitoring methods may in some cases leave beachgoers vulnerable to a range of illness Polluted beach water can cause rashes, car aches, pink eyes, respiratory infections, hepatitis, encephalitis, gastroenteritis, diarrhea, vomiting and stomach aches.

In the light of this knowledge, it would be criminal to permit industrial genocide with effluents contaminated with mercury, arsenic, nutrients pollution, chemical, pesticides, oil and petroleum chemicals, mercury, PCBs, Dioxinx, acid mine drainage, spills and leaks marine debris and thermal pollution.

### **3.2.4 Water Pollution Control through Statutes**

The existing legislation in Nigeria before the 1987 Koko Harmful Waste Dump saga were the 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; Not only these, the Nigerian Criminal Code Cap 42 which deals with fouling of water, 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 (Ola C. S. 1984, 155 – 158).

Under the S2(1) of the River Basins Development Authority Act 1976, the function of each River Basin Authority is hereby stated to be: "The control of pollution in Rivers and likes in the Authority's area in acceptance with nationally laid down standards"

However, "events surrounding the unfortunate Toxic Waste Saga in the small town of Koko in Delta State in 1987 which gave rise to the Harmful Waste Decree 42 of 1988. The incidence also facilitated the establishment of the Federal Environmental Protection Agency (FEPA) through Decrees 589 of 1988 and 59 of 1992 (as amended) FEPA was no doubt charged with the overall responsibility for environmental management and protection across the country" The burden of environmental control rested with the FEPA until 1999 when FEPA and other relevant Departments and

parastatal in other ministries were merged to form the then Federal Ministry of Environment now Federal Ministry of Environment, Housing and Urban Development (President Umar Musa Yar'Adua G.C.F.R 2007, 15 – NESREA Report).

National Environmental Standards and Regulations Enforcement Agency (NESREA) established in 2007 via the Act of Parliament as the backbone of environmental protection in Nigeria; was established according to Dr. Goodluck Jonathan (the Vice President) as he then was, reiterated and informed the participants of the importance of compliance, monitoring and enforcement of environmental standards and laws in ecosystem integrity and sustainable development.

In a similar vein, many regulations were made and published in gazette by the National Environmental Regulations in various aspect of pollution in 2009. One of the boards set up to protect waster 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: 17).

With all these efforts been made by the Nigerian Government, Oil Spillage contaminated Coastline in the United States of America where some citizens were blaming the Obama government for not taking instant action to arrest the menace (CNN News 28/05/10). The issue of legislation and statutes for the sustainability of our environment shall be discussed in the later units.

### **3.3.1 Noise Pollution**

Noise is a sound, especially when it is loud, unpleasant or disturbing. It can be countable or uncountable (A.S. Hornby 1984, 991) Noise according to Hutchinson is “unwarranted sound. Land noise is a major pollutant in towns and cities. Lower levels of noise are an irritable...” 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. Economic Growth and prosperity has no doubt led to an upsurge in the source of noise pollution worldover. The ignorance of the health hazard of noise may be the sole reason for non challant attitude of people towards noise pollution. No wonder C. S. Ola’s observation. The average urban dwellers are open to health problems as a result of long continuous exposure to noise, sometimes at high intensities”.

Noise pollution from ship engines and solar systems make it difficult for marine mammals like whales, dolphins and porpoises to communicate, find food, and avoid hazards. Powerful solar systems operating at certain frequencies have been implicated in whale beaching and may cause damage to marine mammals sound-sensitive internal structures, causing internal bleeding and even death.

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.

### **3.3.2 Impact of Noise Pollution**

Exposure to perpetual or regular noise of a high intensity usually result into having impairment, decrease efficiency, psychological disorder, disturbance of sleep and emotional disturbance. In some jurisdiction, excessive noise is believed to “cause fatigue, impaired concentration and insomnia.

### **3.3.3 Classes of Noise Pollution**

Noise pollution can be classified into two, namely:

- 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, 1999.28). In these industries workers are exposed to indiotic 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.

### **3.3.4 Sources of the Noise Pollution are:**

- a. amplified musical engine.
- b. domestic noise
- c. motor vehicle noise
- d. aeroplane noise
- e. locomotive railway noise
- f. noise generated by the religious houses
- g. voices/sound from the neighbours
- h. boat engines
- i. Road traffic noise



- j. Noise from construction sites
- k. factories – mining, quarrying noise
- l. Noise emission from industries
- m. Mechanic and welder workshops' noise

### 3.3.5 The Official Regulation for the Control and Management of Noise

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. The section 1 of the Gazette enumerated the main purpose of these Regulations which is “to ensure maintenance of a healthy environment for all people in Nigeria, the tranquility of their surroundings and their psychological well being by regulating noise levels and generally to elevate the standard of living of the people by:

- a. prescribing the maximum permissible noise level a facility or activity to which a person may be exposed.
  - b. providing for the control of noise and for initiating measures for reduction of noise and
  - c. generally for giving effect to the provisions of S 22 of the Act.
- The Act is subsequent parts and sections specified further the permissible noise levels. It is a good development in Nigeria and Africa in general that the third world countries are environmentally conscious.

## 6.0 Tutor Marked Assignment (TMA)

- 1a. Define Pollution
- b. Identify the types of Pollution
- 2. Highlights the sources of water and noise pollution
- 3. Discuss the efforts of government and people towards curbing the menace of these identified pollutants.

## 4. Conclusion

Having defined pollution variously, particularly, it is assumed to be a relative concept because hardly no substances exist in an unblemished, purest nature. It is when the blemish or impurities develop to unbearable level that it now becomes endangering species and very harmful to animals and plants.

Therefore, it is defined in relation to the types and sources as the addition to air, water, land and any other materials that is not wanted, that is in excess of acceptable amount (pollution).

**Summary**

In this unit, these areas of pollution were addressed.

- i. The major types and sources of pollution i.e
  - a. Water Pollution
  - b. Land pollution
  - c. Air pollution and
  - d. Noise pollution
- ii. Water Pollution, classes of water pollution, its effects on organisms, control of water pollution through statutes.
- iii. Noise pollution defined, its impact/effect, classes and legal control were equally discussed in this unit.

**7.1 References and Further Readings**

1. The Hutchinson Encyclopedia (New Ed.) 1992
2. A. S. Hornby (1984) Oxford Advanced Learner's Dictionary (7<sup>th</sup> Ed.)
3. Dharmendra S. Sengar (2007) Environmental Law, Prentice – Hall of India, New Delhi
4. Lawrence Atsegbua et al (2004) Environmental Law in Nigeria (Theory and Practice) Ababa Press Ltd, Lagos.
5. See World Health Organization Regulations on Quality of Water January 1979 p3
6. See IndianExpress New Delhi Feb 18, 1988
7. See The Punch, April 29, 2010 P 17
8. C. S. Ola (1984) Town and Country Planning and Environmental Laws in Nigeria UPL, Ibadan.
9. NESREA (2007): REPORT OF FIRST NATIONAL STAKEHOLDERS FORUM ON THE NEW MECHANISM FOR ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT IN NIGERIA.
10. National Environmental (Noise Standards and Control Regulations, 2009, No 67, Vol. 69

**UNIT 3**  
**TYPES AND SOURCES OF POLLUTION**  
**AIR POLLUTION**

**CONTENTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
  - 3.1 Air Pollution
  - 3.2 Land Pollution
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (TMA)
- 7.0 References and Further Readings.

**1.0 Introduction**

Industrialization has endowed us with various kinds of smoke that tend to disturb the atmosphere. The air pollutants are responsible for causing lungs, throats and eye diseases. There are many chemicals in the air that cause diseases.

In addition air pollution is the introduction of chemicals, particulate matters, biological materials that are harmful or cause discomfort to human or other living organisms or damages the natural environment into the atmosphere.

**2.1 Objectives**

At the end of this unit, the student should be able to know:

- Meaning and effect of air pollution
- Meaning and effect of land pollution
- The way out of the problems of air and land pollution

**3.0 Main Content**

- 3.1 Air pollution
- 3.2 Land Pollution

Generally, today, most of the industrial societies are no doubt exposing themselves to these man made poisons with almost total ignorance of their delayed or cumulative effects.

Be that as it may, a reknown world scientist had already warned severally about three centuries ago, that effects of air pollution arising from combustion of coal are the

reduction of sunshine and increased occurrence of disease and death from respiratory troubles (Dahrmandra S. Sengar 2007: 15).

### **3.1.1 What is air Pollution?**

Air pollution can be defined as the pollution caused by substances released into the air by human activities in such concentration which is sufficient to cause harmful effects to human health, vegetables, property or to interfere with the enjoyment of property. Air pollution occurs when a particular proportion of air constituents by industrial smokes, motor carbon monoxides and other toxic gases. Most of these airborne diseases are product of toxic gases increase or emitted into the air by the manufacturing industries that are expanding daily and tend to affect human health and reduces human lifespan.

Air pollution in the words of Lawrence Atsegbua et al (2003:75) “ 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”. According to the authors “It is the contamination of the atmosphere by gases and solids, produced in the burning of natural fuels, chemicals and some industrial process and in nuclear explosions.

In a nutshell, it is 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: 28).

Air pollutant on the other hands is known as a substance in the atmosphere that can cause injurious to human and the environment. Pollutant can be in form of solid particles, liquids droplets or gases. There could be naturally caused manmade.

Atmosphere in this perspective is a complex, dynamic natural gaseous system that is essential to support life on planet earth.

### **3.1.2 Sources of Air Pollution**

The sources of air pollution refer to the various locations, activities or factors which are responsible for the releasing of pollutants in the air. There are two keys 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. 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.

### 3.1.2 Classes of Pollutants

Pollutants can be classified into two as either PRIMARY or SECONDARY. These are the two major classes of air pollutants.

- a. PRIMARY air pollutants are substances directly emitted from a process such as ash from a volcanic eruption, the carbon monoxide gas from a motor vehicle exhaust or Sulphur dioxide released from various factories into the air.
- b. SECONDARY air pollutants, this type of class of pollutants are not emitted into the atmosphere directly. A good example of a secondary pollutant is ground level ozone, one of the many secondary, pollutants that made up photochemical smog.

Similarly, pollutants may be both primary and secondary that is, they emitted directly and equally can be formed from other primary pollutants.

Secondary pollutants are:

- i. “Particulate matters formed from gaseous primary pollutants and compounds in photochemical smog. Smog is a kind of air pollution. “Smog” in this sense, is a portmanteau of smoke and fog. Classic smog results from large amounts of coal burning in an area caused by a mixture of smoke and sulphur dioxide. Modern smog does not usually come from coal but from vehicular and industrial emissions that are acted on as in the atmosphere by sunlight to form secondary pollutants that also combine with the primary emissions to form photochemical smog.”
- ii. Ground level ozone (O<sub>3</sub>) formed from NO<sub>3</sub> and VPOCs. Ozone (O<sub>3</sub>) is no doubt a key constituents of the atmosphere. It is also an important constituents of certain regions of the stratosphere commonly known as the ozone layer.

Photochemical and chemical reactions involving it drive many of the chemical processes that occur in the atmosphere by day and by night. This include all abnormally high concentration brought about by human activities mostly the combination of fossil fuel. It is a pollutant and on constituent of smog.

- iii. Thirdly, peroxyacetyl nitrate (PAN): is a secondary pollutant formed from  $\text{NO}_x$  and  $\text{VOC}_s$
- iv. Apart from the above, there are minor air pollutants which include a huge number of minor hazardous air pollutants. Although some of these are regulated in the United State of America under the Clean Air Act and in Europe under the Air Framework Directive.
- v. There are also a variety of persistent organic pollutants which can attach to particulate matter. Persistent Organic Pollutant (POPs) are organic compounds that are resistant to environmental degradation through chemical biological and photolytic process. As a result of this, they have been observed to persist in the environment to be capable of long-range transport, bio-accumulate in human and animal tissues, bio-magnify in food chains and to have potential significant impacts on human health and the environment.

### **3.1.4 Effect of Air Pollution**

#### **Health Effects:**

The World Health Organization (WHO) states that 2.4 million people die each year from causes directly linked to air pollution, with 1.5 million of these deaths linked to indoor air pollution. As a result, Epidemiological studies suggest that more than 500,000 Americans die each from cardiopulmonary disease attributable to breathing fine particle air pollution. In a similar vein, a study by the university of Birmingham has shown a strong collection between pneumonia related deaths and air pollution from motor vehicles. Worldwide more deaths per year are attributed to air pollution than to automobile accidents. In the 2005 publication pollution related deaths include aggravated asthma, bronchitis, emphysema, living and hearth diseases and respiratory allergies. The USEPA estimate that a proposed set of changes in diesel engine technology (Tier 2) could result in 12,000 fewer premature mortalities, 15,000 fewer heat attacks 6,000 fewer emergency room visits by children with asthma, and 8,900 fewer respiratory – related hospital admissions each year in the United States.

The Bhopal Gas Tragedy in India which in 1984 may be cited as the worst short term industrial disaster of our time in term of the death toll and severe organ injury to the residents of Bhopal where according to the Supreme Court Report only 2,660 people died instantaneously and quite a good number of inhabitants of the town suffered from

several ailments in *Union Carbide Corporation v Union of India, AIR 1992 Sc 248 at 256.*

It all happened as a result of leaked industrial vapors from the Union Carbide factory, vapors belonging to Union Carbide Inc USA killed more than 2,000 people outright and injured many from 150,000 to 600,000 others some 6,000 of whom would later die from their serious injuries.

The United Kingdom suffered its worst air pollution event when the December 4 Great smog of 1952 formed over London. In Six days more than 4,000 died and 8,000 more died within the following months. Early in December 1952, a cold fog descended upon London. As a result of excessive cold, Londoners began to burn more coal than usual. Concentrations of pollutants coal smoke in particular, built up dramatically.

An accidental leak of anthrax spores from a biological warfare laboratory in the former USSR in 1979 near Sverdlovsk is believed to have been the cause of hundreds of civilian deaths. The worst single incident of air pollution to occur in the United State of America occurred in Donora, Pennsylvania in late October, 1948 when 20 people died and over 7,000 were injured.

The health effects caused by air pollutants may range from subtle biochemical and physiological changes to difficulty in breathing, wheezing, coughing and aggravation of respiratory and cardiac conditions. These effects can result in increased medication use, increased doctors or emergency room visits, more hospital admissions and premature death. The human health effect of poor air quality are far reaching, but principally the body, respiratory system and the cardiovascular system. Individual reactions to air pollutants depend on the type of pollutant a person is exposed to, the degree of exposure, the individual health status and genetics.

From a new economic study of the health impacts and associated/related cost of air pollution in the Los Angeles Basin and San Joaquin Valley of Southern California shows that more than 3800 people die permanently each year because air pollution level violate Federal Standard.

The number of annual premature deaths is considerably higher than the fatalities related to auto collisions in the same area which average fewer than 2,000 per year.

In a related development, the Indian Council of Medical Research has documented the gas-related ailments of the children. This was as a result of the fact that about one-fifth of the Indian urban residential population of gas related areas are the children born in the post-tragedy to gas-exposed women whose blood had been contaminated. It is a fact that, air pollutants weaken the body's natural, protection mechanism to fight infection, harmful bacteria and viruses. The pollutant molecules interacts

unfavourably with the intricate molecules and fluids of the human body (India Express 1992: 2 & 3).

According to the medical experts, the injury to human health depends upon the degree of toxicity concentration, duration of exposure and individual susceptibility.

In Nigeria, the degree of industrial emission are second to vehicular carbon monoxides emission which are the major sources of urban air pollution problems. In some areas in the country where there are concentration industrial plants are linked with the cause of air quality degradation. The national and localized problems include cement Kiln dust SO<sub>2</sub> from the fertilizer plants in Kaduna and Rivers States, cements factories in Sokoto, Ewekoro, Benue and Kaba 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 generated more than 60% of Nigeria's industrial activities are located. All these factories generated their own generating plants because of inadequacy of power supplies by the national power authority – Power Holding Company of Nigeria. (PHCN).

### **3.1.5 Regulatory Framework of Air Pollution**

The existing laws on air pollution are section 246 of the Criminal Code, Cap 42, Laws of Federation of Nigeria 1958 which dealt with burial in houses, Births, Deaths and Burials Acts, Noxious Acts; the Lagos Public Health Bye Laws 1958 and the Criminal Code Act Cap 42, Laws of the Federation of Nigeria, 1958 which deals with matches with phosphorus.

S246 of the Criminal Code, 1958 states that “any person who without the consent of the President or Governor buries or attempt to bury any corpse in any house, building, yard, garden, compound or within a hundred yards of any dwelling house, or in any open space situate within a township is guilty of a misdemeanor and is liable to imprisonment for six months.

S247 of the Noxious Act states that:

- a. “Any persons who vitiates the atmosphere in any place so as to make it noxious to the health of person in general dwelling or carrying on business in the neighbourhood or passing along the public way, or
- b. Does any act which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life, whether human or animal, is guilty of a misdemeanor and is liable to imprisonment for six months.



Sections 13, 14, 15, 30, 34, 44, 45, 46, 47 and 49 of the Public Health Act equally emphasized the protection of our environment particularly protection of air from being polluted.

The Lagos State Public Health Bye – Laws deal with disposal of night soil and Sections 8, 9, 11 and 13 of Public Health Act

Section 248 of the Criminal Code reads “any person who sells or has in his possession for the purpose of sale any matches made with white (yellow) phosphorus in the manufacture of matches is guilty of an offense and is liable to a fine of twenty naira and any matches in respect of which the offence shall have been committed shall be forfeited.

The Courts have been alive to their responsibilities under civil liability since all the laws already mentioned come under criminal law. **Rylands 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 **Rylands vs Fletcher, Blackburn J.** held that: a person who for his own purpose brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it at his peril, and if he does not do so it is prima facie answerable for all the damages which is the natural consequences of its escape.

In the same vein, Nuisance is an offensive thing which impairs the enjoyment, health or property of another. This is well treated in **Olutimehin Vs Lagos City Council (1969) 1 ALL NLR 403.**

In **Tebite Vs Nigeria Marina and Trading Co. Ltd (1971) UI. LR 432**, the Plaintiff was a legal practitioner, successfully sued the defendant for injunction because the ‘block noxious, dirty and filthy matters his premises constituted a nuisance to him. Similarly, **Karagulamus vs Kolawole Ovesile (1973) 3 ULL.R.**, the fumes coming out of the defendants machines to the Plaintiff’s bedroom were offensive to the Plaintiff who successfully sued and in **Umudje vs Shell B. P Petroleum Development Co of Nigeria Ltd (1975) 8 II SC 156**, the crude oil waste in a pit escaped to the property of the Plaintiff and damaged his lakes and ponds and killed his fishes and, as in the cases already cited, Supreme Court held inter alia that the defendants were liable under the rule in **Rylands vs Fletcher per Blackburn J.**

### 3.1.6 Reduction Efforts

Apart from the legal curtailment of the air pollution, as enumerated in 3:1:5 above, there are many air pollution control technology and land use planning strategies available to reduce air pollution. In most developed countries, land use planning is an important part of social policy, ensuring that land is used efficiently for the benefit of the wider economy and population as well as to protect the environment .

Hitherto, efforts to reduce pollution from mobile sources includes primary regulation, expanding regulation to new sources such as cruise and transport ships, farm equipment and small gas powered equipment such as lawn trimmers, chainsaws, and snowmobiles, increased fuel efficiency such as through the use of hybrid vehicles, conversion to cleaner fuels such as bioethanol, biodiesel or conversion of electric vehicles.

## 4.1 Conclusion

Air is a mixture of gases which surrounds the earth's cooperatively thin layer. Thin layer because about 95% of the 20 kilometers above the earth sea level beyond which oxygen air gradually decreases until it merged into a void of space. The bottom of the thin layer which is about 8 kilometers tick at the equator called troposphere. With this fact therefore, air pollution occurs within the first two kilometers of the atmosphere. That is the tripesphere region. Pollution generally is endemic and constitute hindrance to all living organisms on earth and the earth's ecosystem which in turn affect's the air constituents e.g

- i. Nitrogen -  $N_2$  (78.0%)
- ii. Oxygen -  $O_2$  (20.95%)
- iii. Argon -
- iv. Carbondioxide  $CO_2$  (0.032%)

The effects of air pollution, this occurs when one or several air pollutants like nitrogen oxides, sulphur oxides, carbon dioxide, volatile organic compound, petrochemical oxidants, radioactive substances and particulates are present in such quality characteristics and duration in the indoor and outdoor atmosphere at levels that are injurious to human, plants and contribute to damage or impair the well being. Other air pollutants are Acid rain, Ozone depletion, Green house effect, smog formation and particulate.

The legal regulatory framework to protect the air pollution was discussed in detail.

**5.1 Summary**

- i. The meaning of air pollution and its pollutants were thoroughly discussed.
- ii. The sources of air pollution, the effects of air pollution, the reduction efforts and
- iii. the legal framework for the reductions and preventions of air pollution.

**6.1 Tutor Marked Assignment (TMA)**

- i. Briefly define Air Pollution and the composition of the air
- ii. Identify the air pollutants and discuss them
- iii. Highlights the effects of air pollution in your country
- iv. Discuss the legal regulatory framework of air pollution

**7.1 References and Further Readings**

- i. The Hutchinson Encyclopedia *supra*
- ii. Ola. C. S *supra*
- iii. Dharmendra S. Sengar *supra*
- iv. Lawrence Atsegbua et al *supra*
- v. Hornby A. S *supra*
- vi. Awake “Child Labour, its End in sight” May 22 1999: p 28
- vii. Indian Express, New Delhi, February 21, 1992: 2 & 3)
- viii. Punch April 29, 2010 p17
- ix. CNN News at 3.30 pm 25 May, 2010

## UNIT 4 SOURCES OF POLLUTION

- i. LAND POLLUTION**
- ii. LEGAL CONTROL OF HAZARDOUS SUBSTANCES AND PROCESSES**

### CONTENTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
  - 3.1 Land Population
  - 3.2 Legal Control of Hazardous substances and Processes
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (TMA)
- 7.0 References and Further Readings.

#### **1.0 Introduction**

Land pollution means “the degradation of land by man through harmful activities like dumping of harmful waste materials such as chemical input that are dangerous to vegetation and agricultural production. Chemical fertilizers and herbicides from the bulk of these also caused land pollution”. Pollution on land normally occurs through human efforts. The daily aspiration of man toward improving the natural environment where he find himself had in many times contributed in no small measure to the degradation and contamination of land.

In this unit, legal control of hazardous substances and the procedure for its implementation shall be discussed. The law tend to regulate and regularizes the four types of pollution in Nigeria and the apparatus put in place to enforce same.

#### **2.0 Objectives**

The main objective is to enable the students to know at the end of this unit, the following:

- i. Meaning of land pollution
- ii. Meaning of Waste
- iii. Legal control of hazardous substances and the procedure for its enforcement.

### 3.0 Main Topic

- i. Land pollution
- ii. Legal control of hazardous substances and the procedure/processes.

“Pollution of land in a broad sense can clearly arise from licensed as well as unlicensed activities, although in many cases, pollution of land is just one part of licensed activities. For example, the potential for pollution of soil is one consideration amongst many under the integrated pollution prevention and control regime. More obviously, the disposal of waste to landfill involves direct pollution of land itself, but, if proper steps are taken, then the chance of off-site contamination is reduced to a minimum level. Therefore, there may be a close practical link between waste and contamination. The legal starting point is that the new contaminated land regime does not apply in relation to any land in respect of which there is for the time being in force a site license under the EPA 1990, Part III except where the reason for the land being classified as ‘contaminated land’ is attributable to something other than a breach of the conditions of that license or the carrying on of activities that are licenced which is in line with S78B of EPA 1990.

The term land pollution equally includes anything laid in land which automatically impares its arableness, yield or cultivability such as land mines, booby traps and other similar military devices.

Without prevarication, 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 contains complex substances and sometimes hazardous substances’ (Hesketh H. E 1970:20). One of the identified pollutants linked with petrochemical industries are effluence. These effluence contains a wide range of organic and inorganic contaminants such as phenel, oil, gas, and toxic metals, hydrogen sulphide and ammonia. Others are quarrying, mining of all sorts, causes damage to the environment on a large scale.

However, it is the process which inevitably creates pits and mounds. It destroys the top soil and the sub soil and renders land non – arable and agriculturally wasted and ruined.

The pace and growth of industrialization determines the standard of progress and civilization of a country. Therefore, it is unthinkable now to move away from the part

of industrialization. In this wise, there arises a necessity for evolving a scheme for balancing the needs of industrialization and curbing the evils of hazardous substances and industrial processes causing human health hazards and environmental pollution.

Although, the idea of management of hazardous substances is relatively new to some newly developing industrial nations. For instance, Indian industrial, administrative and legal backgrounds are just being developed, though the problem of toxic hazards has already touched dangerous proportion. In the same manner, Nigeria government and other African Countries are not left out in the move to curb these varieties of pollution.

“Despite series of environmental problems and the activities of foreign waste merchants faced in the country, the Government of Nigeria through activities of the Federal Ministry of Environment (FMOENV), National Environmental Standards and Regulations Enforcement Agency (NESREA) and Environmental Impact Assessment (EIA) has mapped several effective strategies on tracking hazardous waste to ensure effective disposal. The Basel regional co-ordinating centre located at Ibadan has really achieved in recycling and reuse through innovative research and conversion of hazardous material. Local companies like Bosket are meeting industrialized standards in the use of smokable flame technology for treatment and retiva that is locally grown is of great achievement in remediation of impacted site’ (Olanipekun et al 2009).

### **3.2.1 Legal Control of the Four Types of Pollution in Nigeria**

From the views of Olanipekun O, ‘Anibilowo K.B. and M. Mundi who are environmentalists, that, Nigeria as one of the developing countries is faced with different environmental problems. The total and practical lack of effective regulatory policies on hazardous waste management and lack of monitoring system in place on environmental issues in the early eighties, made the country susceptible recipient of surreptiously exported ‘Transboundary hazardous waste dump by developed and industrialized countries due to activities of waste merchants from industrialized nations, a situation the trio described as “Transboundary Hazardous Waste Dump”. In Ibitayo (2006) parlance on transboundary dumping of hazardous waste, he cited hazardous waste as an inevitable by product of industrial development manufacturing processes, a situation in which Nigeria is not spared from and no nation in the global village can be left out.

However, “It is commonplace that apart from air, water is the most essential requirement for all living beings and breathing thing” (FEPA 1991 Guidelines P. 23)

As a result, air and water are indeed the *sin gulbus*, must be in existence for any organic entry. In order to prevent this hazardous pollution and subsequent threat to human, organism and ecosystem, the Nigerian government has entered a number of treaties, convention, agreement and put in place pieces of national legislation, State legislation and local government bye law to prevent water, air, land and noise pollution respectively. In furtherance of the government efforts, the Nigerian government in 1993 promulgated the Water Resources Act No 101; This is in compliance with the power conferred upon it by the Nigerian Constitution particularly Part 1, 2<sup>nd</sup> Schedule, paragraph 62 of Constitution of Federal Republic of Nigeria 1979.

Hitherto, promulgation of this Act, the government meant to vest in the Federal Authority the right to use and control certain categories of water resources in all cases where they affect more than one state of the Federation.

The objectives of Water Resources Act, 1993, are as follows:

- a. The promotion of the optimum planning development and use of Nigeria's water resources.
- b. The co-ordination of such activities that are likely to influence law, enhance the quality, distribution, use and management of water.
- c. The application of appropriate standards and technologies for the investigation, use, control, protection, management and administration of water resources.
- d. The facilitation of technical assistance and rehabilitation for water supplies.

With this Act, the Minister of Water Resources is charged with the sole responsibility of ensuring that proper and adequate provisions are made and enforced for the environment through the supply of water for the drainage, the safe disposal of sewage, effluent and waterborne waste, and the control and prevention, flooding erosion and damage to the water shed areas and also the protection of inland fisheries, flora and fauna.

Most of these laws related to the control of water pollution has been discussed in the last unit particularly the convention series and the Federal Government of Nigeria.

### **3.2.2 State Water Pollution Laws**

There is no state in Nigeria today without the Water Works Act dealing with water pollution. This Act provides for a water authority that should manage supervise the water work and vested powers in Water Authorities. For instance, s14 and 15 of Lagos State Water Works Law, Cap 138 of Lagos State discouraged the excessive consumption of water and the wastage of water. This Act prohibited pollution of water in any form. Person who bath, wash and throw or cause an animal or material to enter

the water works are liable for an offence. The Act promotes the establishment of Water Management Board Law. All states in Nigeria have various statute dealing with water pollution.

1. Edo State's Water pollution is treated as a public health issue under S 3 of the Edo state Environmental Sanitation Edict. Whoever is caught polluting water or stream shall face the penalty of N500 or one month imprisonment or both. Now this punishment is too minimal for the gravity of the offence of water pollution.
2. Lagos State Environmental Pollution Control Edict 1989 s19 prohibits indiscriminate digging of wells and bore holes for industrial purpose without the written approval of the Ministry of Environment and the Lagos State Water Corporation.
3. Abia State is not left out, enacted Environmental Protection Agency Edit of 1994 which set a water quality effluent limitation standard particularly s17(1), the Agency is mandated to set an interim goal to make all state water safe for marine resources, wildlife and human life and all rural and urban towns are required to use secondary sewage treatment for all effluent.
4. Oyo State Environmental Protection Agency (OYSEPA) Edict and Environmental Health Officers Act 2002. The essence of promulgating these statutes is to reduce and forestall hazardous waste and general pollution in the nooks and crannies of Oyo State.
5. The aspect of curbing pollution in all ramification is the essence of Environmental Impact Assessment (EIA) Act 2007 by the Federal Government of Nigeria.

In addition, the earliest form of law dealing with water pollution can be found in Nigeria Criminal Code of 1916. This statute made any form of water pollution criminalized. This was found in S 245 of Criminal Code 1916 provides as follows:

Any person who fouls the water of any spring, stream, well, tank or reservoirs, so as to make it less fit for the purpose for which it is ordinarily used is guilty of misdemeanor and is liable to an imprisonment of six months.

In a similar vein, the Public Health Act of 1917 equally corroborated Criminal Code of 1916 and s13(1) of the Act states that:

Wherever by an act or default, causes or suffers to be brought or to flow into any well, stream, tank, reservoir, aquatic or pond used or intended for supplying water to man or beast or into conduct communicating therewith any deleterious substance or does any act whereby such water is or may be folded shall be liable to a fine of ten pounds



(twenty naira) and a further sum of two pounds (four naira) for everyday during which the offence is committed after conviction.

In the present dispensation, all the states of the Federation have enacted Public Health Laws that deals with protection of health through sanitation and hygienic environment.

### **3.2.2 Some International Agreements Entered into by the Federal Government of Nigeria Concerning Water Pollution.**

As far back as 1964, Nigerian Government had entered into an agreement concerning the River Niger Commission and the Navigation and Transport on the River Niger. Article 12 (ii) of the treaty between riverine states (coastal states) that is, Nigeria Niger, Mali, Guinea Bissau and Sierra Leone States collectively agreed to:

“Abstain from carrying out on the portion of the river, its tributaries and sub tributaries under other jurisdictions, any works that are likely to pollute the water, or any modification likely to affect the biological characteristics of flora and fauna without prior consultation with the commission”

There was another treaty on International convention on the prevention of marine pollution by Dumping of Wastes and other matters (now amended).

### **3.2.2 The main objectives of these agreements are:**

- i. To control pollution of the sea by dumping and to encourage regional agreements supplementary to the convention. Nigeria signed it on the 19<sup>th</sup> of March 1976.
- ii. To protect and develop the Marine and Coastal Environment of the West and Central Africa Regions. Convention for cooperation among African Coastal countries was signed.
- iii. To protect the marine environment of coastal zones and related internal waters falling within the jurisdiction of the states of the West and Central African Regions.

### **3.3 Noise Pollution**

Noise pollution is provided for in the Federal Environmental Protection Agency (FEPA) Act particularly at S19 of Act No 59 of 1992 which mandate the agency:

- i. To identify major noise sources, noise criteria and noise control technology.
- ii. To establish such noise abatement programs and noise emission standards as it may determine necessity to preserve and maintain public health or welfare.

- iii. To make recommendations to control noise originating from industrial, commercial, domestic sports, recreational, transportation or other similar activities.

3.3.2 The Guidelines and Standards for Environmental Pollution Control in Nigeria by FEPA on Noise. These limits are made pursuant to S19 of FEPA Act 1992 which stipulates as follows:

<b>Duration Per Day/Hour</b>	<b>Permissible Express Limits</b>
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	115
0.2 or less	115

However, any unwanted sound, or that which is beyond the acceptable noise limit is noise pollution

### 3.3.3 Noise Standards and Control Regulations Act 2009

Noise Standards and Control Regulations Act 2009 which the main purpose is to ensure maintenance of a healthy environment for all people in Nigeria, the tranquility of their surroundings and their psychological well-being by regulating noise levels and generally to elevate the standard of living of the people

- a. prescribing the maximum permissible noise levels a facility or activity to which a person may be exposed.
- b. Providing for the control of noise and mitigating measures for reduction of noise and
- c. Generally for giving effect to the provisions of s22 of the Act.

The First schedule of the Act states Maximum Permissible Noise levels as follows:

COLUMN 1		COLUMN 2	
FACILITY		MAXIMUM PERMISSIBLE LIMITS db(A) (Leg)	
		DAY	NIGHT
A	Any building used as hospital, convalescence home, home for the aged, sanitorium and institutes of higher learning, conference rooms, public library, environmental or recruitment sites.	45	35
B	Residential buildings	50	35
C	Mixed residential (with some commercial and entertainment)	55	45
D	Residential + ;Industry or small scale production + Commerce	60	50
E	Industrial (outside perimeter fence)	70	60

Above noise levels are weighted average in the facility over the hours defined for night and day below.

Time Frame: use duration

Day - 6.00 am – 10.00 pm

Night - 10.00 pm – 6.00 am

The time frame takes into consideration human activity.

For further noise limitations as stipulated by the Act, see No. 67, Vol. 96, National Environmental (Noise Standards and Control) Regulations. 2009

### 3.3.4. Some States Legislation On Noise Pollution

1. Edo State; S 11 of the Edo State Environmental Sanitation Edict of 1994 provides that:  
Making noise or nuisance through the regular use of sound equipment of any description, in a manner to cause hearing discomfort to a neighbor or the immediate public is prohibited. However, the noises from religious, traditional and social ceremonies are excluded. Under s46 of the Road Traffic Edict cap 148, Law of Bendel State, 1976 there is prohibition of noise.
2. Kaduna State: Kaduna State Environmental Sanitation Edict of 1984 prohibits all forms of noises.
3. Gongola State: Gongola State Environmental Sanitation Edict prohibits playing of gramophone records in shops and use of loudspeakers.

4. Oyo State: The Oyo State Environmental Sanitation Edict 1984 and 1990 prohibits any form of noise in public places that may hinder tranquility of the State. And equally limits the loudness of the loudspeaker.

Although, these prohibitions are not adequately conceived, most importantly, there is no mention of the level of noise that will be allowed. It is therefore recommended that noise excess of 90 DBA should be regarded as harmful. Under the Workmen's Compensation Act, occupational deafness should be prescribed as an industrial disease. This should be in addition to the other 33 diseases in the Women's Compensation Prescribed Diseases Order 1996

The noise can be controlled by limiting work schedules and noise levels in work place. In addition, occupation health workers could undertake regular monitoring of affected workplaces. Finally, the law should impose on the employer, a duty to ensure that ear plugs.

### **3.4.1 Air Pollution**

This type of pollution is most controversial form of pollution. Polluted air could be remedied by the spraying of dispersant or aerosols so as to coagulate the air globules on the ground for accumulation and disposal. As a result of general awareness at both domestic and international arena made the air pollution limited drastically based on international and domestic control mechanisms.

3.4.2 FEPA was charged with responsibility of protecting and developing the environment and initiation of policies in relation to environmental research and technology and equally to advise the government on environmental policies (See s4, FEPA Act No. 59, 1992.

S9 of the Act empowers the Director General of the Agency to establish programs for the prevention, reduction and elimination of pollution of the nation's air, land, inter-state, water, as well as programmes for the restoration and enhancement of the nation's environment.

In addition, special instrument of FEPA Act No. 8, 1991 provides standards and guidelines as follows:

- i. National Effluent Limitation Regulations all industrial facility are mandated to install anti-pollution equipment, compels in -house effluent treatment, prescribes maximum limit of effluent parameters allowed to discharge and stipulates penalties for contravention.

- ii. Under the National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Water) Regulations 1991. All the industries are expected to have a pollution monitoring unit at each site and to analyses all discharge and make monthly report to FEPA. In addition, all Accidental or unusual discharge must be reported to FEPA within 24 hours.

### 3.4.2 Air Pollution Law in some States

Air pollution constitute grivious hazardous to human health, and this is the reason why various states of the Federation of Nigeria have their own laws regulating air pollution in their various states' environment.

- i. Edo State: Edo State Environmental Sanitation Edict was silent on air pollution and emission from old and poorly maintained vehicles, generators and motorcycles. This type of emission from vehicles releases pollutants such as carbon monoxide, carbon dioxide, nitrogen oxide into the atmosphere which affect the quality of atmospheric air in urban industrial centre in our country. (Though other industrial areas of the world are affected but the effect depend largely on what the government put in place to check the industries excesses).
- ii. Lagos State: No doubt Lagos State is leading light in this area of preventing air pollution. Although, Lagos State is the business nerve of Nigeria and most highly industrialize state in Nigeria. s 15 (i) of the Lagos Environmental Pollution Edict 1989 and the recent Law enacted in 2008 prohibits the discharge into air of any inadequate filtered and purified gaseous wastes or gases containing substances injurious to life. Section 13 of the Law stipulates that "No person shall:
  - a. Burn refuse on any tenement open space.
  - b. Burn the contents of any public owned dustbin.
  - c. Throw or by industrial or commercial waste on any tenement.
 Under s15, no obnoxious, toxic and poisonous waste shall be deposited in a waste dustbin".

### 3.4.3 Air Pollution Treaties Which Nigeria is aSignatory

The air pollution has for long attracted United Nations attention and these treaties and conventions have been organized to curb the menace of pollutants.

- i. Article 1 of 1979 Convention on Long Range Trans –Boundary Air Pollution defined air pollution as:  
The introduction by man, directly or indirectly of substance of energy with the air, resulting in deleterious effect of such a nature as to endanger human health,

favouring living resources and ecosystems and material property and to cause an impairment or to interfere with amenities and other legitimate use of the environment.

- ii. Vienna Convention for the protection of the ozone layer.  
Nigeria became a signatory to the treaty on 29<sup>th</sup> January 1989, it came into force on 22<sup>nd</sup> September 1989. The main objective is to protect the ozone by taking precautionary measures to control global emission of substances that deplete it.
- iii. Treaty on Principles Governing the Activities of States in the Exploration and use of  
outer space, including the moon and other celestial bodies. Nigeria government signed it on the November 14, 1967. The treaty is mainly to establish an international legal regime of the use of outer space.

### **3.5.1 Land Pollution**

In order to reduce drastically land contamination, the Nigerian Government at all levels has put in place a number of legislative measures. The most remarkable of which is the Land Use Act, 1978. The main theme of this Act is to ensure that the ecological and aesthetic value of the nation are preserved and enhanced.

Land Contamination: Land is in a 'Contaminated state' if it is in such condition by reasons of substances in, on or under the land that harm is being caused or there is possibility of harm being caused or is likely to be caused. From EPA Act 1990, it is not required that the relevant harm, or its possibility be significant. However no steps have being taken to meet the hopeful suggestion that guidance under the Act should apply to all types of harm that would be 'prejudicial to health or a nuisance'.

### **3.5.2 The Impact of Pollution on the Environment.**

The impact of pollution generally on the environment is that once the environment, surrounding or atmosphere is polluted, the following will happen.

- i. The quality of the environment, air, water and land changes from its natural state to detestable level.
- ii. The environment most of times becomes less suitable for some or all of the uses for which it is suitable in its original state.
- iii. The implication of pollution on health in societies can not be over estimated because pollution destroys the mental, social and physical well being of man. For example living diseases are contracted from inhaled dust, skin disease from allergic materials and toxic wastes usually released into the atmosphere.

- iv. Another impact on human body occurs when a toxic substances has been absorbed into the bloodstream and distributed throughout the whole of body system. Body system include blood, nervous system, liver, kidney, veins and skin.
- v. The impact of noise pollution can lead to headaches, hearing impairment, emotional disturbance, disturbance of sleep, decreased efficiency and psychological disorder. Noise pollution causes fatigue, insomnia and impaired concentration (Polish Weekly Magazine “Przygacloika”).
- vi. The impact of pollution on the ecosystem is more than its direct effect on humanity. One of its direct consequences is destruction of ecological balances (environmental quagmire). A good example of this claim occurred in Minimata Japan, (1953 – 1960) where people eating fish already polluted by mercury. The resultant effect was the untimely death of 120 Japanese and many seriously sustained injuries. The Bhopal injuries India experience in December 4, 1984 will continue to linger for a long time. It occurred as a result of release of methyl isocyanate from the pesticide plant of American’s multinational conglomerates, Union Carbide Corporations led to over 3,000 deaths. As a result of this calamity, several claims running into multi billions of US dollars were claimed against the culprit company. Similarly the leakage of Oleum gas from Shriram Food and Fertilizer Industries in Delhi was another example where hazardous industry was located in the dearth of the town.

The occurrence was described as follows: ‘It is a catastrophe which has no parallel in industry history. This is the Hiroshima of the chemical industry’ (Theresa Illegbine 1994).

In Nigeria, particularly Zamfara State where many lives were lost to lead poisoning (May, 2010) Over 300 lives were lost within four months in six villages in Anka and Bukkuyum local government area of Zamfara State. Investigation shows that, illegal mining is responsible for the deaths where thousands of children and pregnant women are most affected by the lead poisoning.

In Abare, Dutse, Daji and Dereta, lead poison was responsible for the high infant mortality and incessant miscarriages in women in the last six months.

The worst cases, were recorded in Dereta, where almost every household with male children engages in lucrative but deadly activity (The New July 05, p 37).

- vii. Additional impact is the indiscriminate felling of trees which has been a major source of environmental degradation. Deforestation lead to removal of top soil and resulted into variety of erosion which serves as a menace to human existence. It equally affect continuity of vegetation and natural life –natural life is dying.
- viii. Another effect of pollution is the effect of oil pollution on local environment, which can be very severe and persistence. This is very rampant in the oil exploration areas particularly, the south – south of Nigeria.
- ix. Depletion of ozone layer and global warning was as a result of effect of air pollution. It is described as ‘green house gases which was the effect of steady growth industrialization. The application of chlorofluorocarbon (CFCs) has been linked to depletion of ozone layer.

Although the occurrence of pollution generally cannot be expressly stopped but can be drastically reduced and possibly put in control by all and sundry efforts in the society. These environmental pollution have forced both Federal, States and Local governments even international bodies to examine the adequacy of safety and pollution control devices in hazardous industries and also to evaluate whether they pose a danger to the workers and the communities around these establishments. The main issue is the necessity for evolving a scheme for balancing the needs of industrialization and curbing the evils of hazardous substances and industrial proceeds causing human health hazardous and environmental pollution.

### **3.6 Law Relating to Pollution Control**

The laws relating to pollution were in existence even prior to the enactment of the Environmental (Protection) Act in Nigeria, Indian, and in developed countries of the world when the issue of environmental pollution became globalised particularly in 1972 at Stockholm submit. Although, it is difficult for any country or body to enact laws that can save nature from human abuse. It is man himself that can do it. Man need to change their destructive ways to protect nature and the environment. Nevertheless, legislations are very important and necessary.

Some of the environmental laws regulating the Nigerian environment with particular reference to oil and gas industry. These include:

- i. The Criminal Code
- ii. The Oil Pipelines Act 1965 as amended by the Oil Pipeline Act 1965.
- iii. The Mineral Oil (Safety) Regulation 1963
- iv. The Petroleum (Drilling and Petroleum) Regulations 1969
- v. The Oil in navigable waters 1968



- vi. The Oil Terminal Dues Act 1969
- vii. The Petroleum Act 1969
- viii. The Associated Gas Reinjection Act 1969
- ix. The Oil spillage Regulation 2009 others (non oil Regulatory Acts)
- x. National Environmental (Noise Standards and Control Regulations 2009)
- xi. National Environmental (Sanitation and Waste Control) Regulation 2009
- xii. National Environmental (Food, Beverages and Tobacco Sector) Regulation 2009
- xiii. National Environmental Access to Genetic Resources and Benefit Sharing) Regulation 2009 etc

All these shall be discussed extensively in the part 11 of this work.

#### **4.1 Conclusion**

Nigeria is one of the developing countries of Africa therefore, the country is not exempted with different environmental problems facing their third world counterpart and even the advanced nations of the world experienced the same problems. The total and practical lack of effective regulatory policies on hazardous wastes management and lack of monitoring system in place on environmental issues in the early eighties made the country susceptible recipient of surreptitiously exported 'Transboundry hazardous waste dump by developed and industrialized countries (Olanipekun O et al). There is need for law to come to the rescue in order to curb the menace of pollution.

#### **5.1 Summary**

In this lecture, we have discussed the general idea about Land pollution and its impact on the environment. The issue of control from letter point of view was equally examined in line with the types of pollution. In the part 11 of this lecture, we shall examine other role of law and its effectiveness.

#### **6.1 Tutor Marked Assignment (TMA)**

- i. Identify the various types of environmental pollution and discuss in detail one of them
- ii. Highlight the role of the government in curbing the menace of pollution.
- iii. How effective is the legal control of environmental pollution in your country.
- iv. Do you think pollution have any glaring effect on the environment?

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