

COURSE GUIDE

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MODULE 1

BASIC CONCEPTS OF ENVIRONMENTAL LAW

- Unit 1: Nature and Meaning of Environment
- Unit 2: Environmental Law Defined
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Unit 1: Meaning of Environment

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1.0 Introduction

It is not a gainsaying to state here that environmental law is a very young field of study under faculty/college of law and in the Nigerian legal curriculum; unlike older courses such as Business/Company Law, Torts, Equity, Trusts, Estate Administration, Contract, the concepts of which are settled and their studies are firmly rooted in the legal curriculum. It is an interesting course despite its acknowledged multi-disciplinary nature and inter relationship with other discipline is such as Economics, Politics and Science. As a result, the environmentalist described the subject as “creative” because it is subversive in principle.

Though in the academics environment law is very recent in Nigeria, the idea of protecting our environment began in pre-colonial era when African’s protected their environment through observation of culture, norms and customs. The second phase was the period of the imperialist, when common law and English statutes were introduced to curb or prevent pollution of our environment.

The emergence of the third era was marked by the toxic waste dumped in Koko, a riverine town in Delta State (formerly Bendel State) in 1988, Nigeria for the first time got

hints of the Harmful Toxic Waste Cargo from some Nigerian students studying in Italy through letters they sent to some media houses alerting them that the lethal cages carrying wastes rejected in Europe were being cosigned to Nigeria under false inscriptions. The rest of this incident is now history, but it opened the eye of Nigerians and the government of the need to put environmental law an enforcement in proper shape.

This third era marked the beginning of Nigeria's seriousness towards protecting her surroundings (G. Oludayo 2004:3).

2.0 Objectives

At the end of this unit, the students would be able to know the meaning of environment; and the concept of environment.

3.0 Main Content

3.1 Concept of Environment

It will be less interesting and hazy to discuss environmental law in an academic oriented institution without lubricating the basic concept of environment. The concept of the environment will determine to a very large extent the scope and nature of laws to be applied in seeking to protect, regulate and control various forms of environmental hazards/pollution (Atsegbua et al 2010:3-4). It is therefore very important to delve into the concept and meaning of environment before we attempt to define law in relation to environment. Man is part of the environment where he finds himself and environment on the other hand houses and accommodates him. He can only survive in an environment based on his compliance with the dictates or ability to acclimatize and adapt to the nature of the environment, otherwise, his survival would be very slim.

3.2 What is Environment?

Environment can be defined from a layman perspective and equally from a narrow and broader view. The concept is very technical in scope and application. Bearing this in mind, it is not easy to arrive at a universal and generally acceptable definition of the concept. Various environmental scholars have made attempt to define the concept in different ways.

Generally, it is defined as our surroundings especially material and spiritual influences which affect the growth, development and existence of living being. The United Nation Stockholm Conference on Human Development asserts ‘man is both creature and moulders’ of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth (See Preamble to the Report of the United Nations Conference on Human Development and Environment, 1972 particularly paragraph 1).

The UN General Assembly, in adopting the environment ideals in the world Charter for Nature 1982, emphasized the centrality of man in environment. It further stated man is part of nature and his life depends on the uninterrupted functioning of natural system which ensures the supply of energy and nutrients. Although these definitions have been criticized as anthropocentric in nature. This is so because, other organisms that inhabits the environment were relegated to the background.

The term ‘environment’ to the layman can be loosely defined as the location in place where he is at any given point in time. It is the surroundings, the condition that you live or work in and the way that they influence how you feel or how effectively you work’ (see the Cambridge International Dictionary, Cambridge University press, 1995)

However, a wide definition of the term is, ‘land including without limitation any building structure or receptacle in an over or under it, water including without limitation surface, coastal and ground waters, and air including without limitation the atmospheres within any natural or man-made structure or inacceptable above or below the ground. It can be seen from a narrower perspective as ‘all or any of the following media; land excluding any building structure or receptacle, water excluding the high seas and coastal areas and air excluding the atmosphere within any natural or man-made structure or receptacle.

Moreover, a writer posited that for the purpose of environmental protection, the question of man and his surroundings do not play the definition given above. ‘Environment’ has a lot more to do than with the conditions that we live and work in. One may not fulfill all the above before he can enjoy his environment. At this junction the Cambridge Dictionary further defines environment as the quality of air, water and land in or on which people, animals and plants live. The maintenance of natures delicate balance is the central

focus of environmental protection. Man therefore needs to protect his immediate environment, territorial waters high seas, air and forest.

To this extent, the Black Law Dictionary defines environment as

“The totality of physical, economic, cultural, aesthetic, and social circumstances and factors which surround and affect the desirability and value of property and which also affect the quality of people’s lives. The surrounding conditions, influences or forces which influence or modify.”

Though, this definition seems broader in outlook it is deficient in material respect.

The National Environmental Standard and Regulation Enforcement Agency Act, 2007 defines ‘environment’ in the following perspectives; ‘Environment’ include water, air, land, animals living therein and in relationship exist among these or any of them.

Section 20 of the 1999 Constitution of the Federal Republic of Nigeria defines environment as

- (a) The water
- (b) Forest and wildlife
- (c) All layers of the atmosphere
- (d) All organic and in-organic matter and living organisms, and
- (e) The interacting nature system that includes the component referred to in paragraphs (a) – (d).

However, the word ‘environment’ means the totality of the air, water, land, forest and wildlife of Nigeria.

4.0 Conclusion

This unit discussed the nature, general concept and meaning of the environment. It is the totality of man and his interaction with other living organisms.

5.0 Summary

There is no way issue of environmental law will be thoroughly discussed in academic without mentioning and exposing the tenet of environment. Environment naturally is the abode of all organisms and all none-living things that sustain man in any place he found himself. The essence of man in any place is not a condition for defying such a place 'an environment'.

6.0 Tutor Marked Assignment

- 1) "Environment is the totality of man and other organism", Do you agree?
- 2) "Discuss the nature and concept of Environment?"
- 3) Highlight the contribution of UN, African Charter and your Country's administrations towards giving a universal definition of the terminology environment.

7.0 References and Further Readings

- 1) 1999, Constitution of the FRN (as amended 2011)
- 2) Andrew Waite and Tim Jewell, (2001), *Environmental Law in Property Transactions*, 2nd edn. London Butterworth's. P. 417
- 3) Ikhide Eghighehia (2007) *Environmental Protection Law*, Effurru/Warri, New Pages Law Publishing Co. pp. 1 – 2.
- 4) Amokaye, G.O. (2004), *Environmental Law and Practice in Nigeria*, Akoka, Lagos University of Lagos, Press pp. 3 -4
- 5) Atsegbua *et al* (supra) p. 3-4

UNIT 2

MEANING OF ENVIRONMENTAL LAW

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Meaning of Environmental Law
 - 3.2 African Concept of Environment and Environmental Protection
- 4.0 Conclusion
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- 6.0 Tutor Marked Assignment (TMA)
- 7.0 References and Further Readings

1.0 Introduction

This unit deals with another very important aspect of this course. That is, the meaning of the concept and its historical background to African concept of environment and environmental protection. The idea of environmental protection is not alien to Africans people who lived in peace and harmony with nature and there was rapour in ensuring a balance between the people and their environment. There was a strong environmental protection mechanism through rudimentary measures, in order to ensure a cleaner environment.

2.0 Objectives

The basic objectives of this Unit are as follows:

- (1) To ensure that students imbibed the meaning of the term, environmental law
- (2) To exposed the students to rudimentary knowledge of African model of environmental protection during the pre-colonial days.

3.0 Main Contents

3.1 Meaning of Environmental Law

It is important to note that environmental law is among those concepts that is not easy at all to define. The coin of the concept has more than two sides. On one side, it may mean pollution control law; at the other side, it is the law rule to everything that is not me (Einstein). To many people, an acceptable compromise as to the meaning of environmental is to law be found between these positions. Environmental law according to Amokaye G. O. represents the body of rules, both from the national and international perspectives, for the sustainable utilisation of resources for the social and economic development of the society. It is a way of protecting all those things we share and are inevitable part of human existence, including all classes of organisms and plants such as the air, water, land, forest and wildlife.

In a nutshell, environmental law is the transformation of those moral principles into legally enforceable norms.

It is also defined further as the law governing the control of the effects of human activity on the physical environment in the overall interest of the public/society.

The term encompasses the subject matters of many important international agreements and municipal laws, regulations, standards and institutional framework for the equitable and sustainable use of the natural resources (Amokaye G. O. 2004: 3)

To Ola C. S. (1984) environmental law covers the whole universe including not only human beings but also plants, animals, forests shrubs, refuse, bacteria and insects. He went further to assert that, like other laws, 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. From Rodgers analogy, “environmental can not repeal the rain and the wind nor can it repeal the laws of ecology. What it can do is to attempt to create order out of chaos as law cannot alter the environment”,

With the above attempts at defining the subject matter of environmental law; it can be deduced that the primary concerns of the concepts is just to provide a conducive atmosphere within the environment humans find themselves. Therefore, environment law

is the legal platform through which the environment could be protected and sustained equally and natural resources conserved.

SELF ASSESSMENT TEST

- Give a universal definition of Environmental Law.

3.2 African Concept of Environment and Environment Protection

The traditional people of African lived with and recognised nature. Apart from the fact that they lived in perpetual harmony with nature, they equally made use of nature around them. No wonder they provided means of protecting their environment by way of protecting, preserving and sustaining nature within their means, ability and knowledge of environmental management, through rudimentary but very effective methods.

The people were very cooperative with one another. The land was owned and managed cooperatively. Traditional method was practiced and strictly land was own collectively. It is not devisable. The environmental sanitation and ecology of the era, surpass the contemporary effort.

Though, the ecology knowledge of that era was attached to the belief of the people about nature; land, air and water and their entire environment. The people believed that is more important than any other natural phenomena because it symbolizes economic and cultural survival: Misuse or destruction of it in any form, may lead to collapse of the society. Elias corroborating this fact posited that the relation between group and the land they held is inevitably complex since the rights of individuals and the group with respect to the same piece of land often co-exist within the same social context.

Land among other constituents of the environment is highly place and valued but not to be abused but a material protected from generation to generation. For instance, the Yorubas in the southwest of Nigeria believe strictly in the fact that ‘land is preserved for the living and the dead’. This is a result of the fact that the land here on earth belong to the living beings and the dead. The testimony of Elesi of Odogbolu before the West African Land Committee where “he said among other things that” I conceived that land belongs to a vast family of which many are dead, few are living and many are yet unborn”.

The importance attached to the land by the African people informed the development of diverse but integrated agricultural, religious and social norms and values systems. All these beliefs; lifestyles, practices and land-tenure system, though not modernized in nature and wholly to meet fast growing modern environmental challenges, at least served the major purposes of the period under discussion.

Despite the crudity or rudimentary nature of the traditional practices, it improved the living standards of the people and their living well within their environment.

3.3. History of Environmental Protection in Nigeria

There is no nation under the hemisphere today without its own historical background to environmental protection. Nigeria is not exempted among the nations of the world with rudimentary ways of preserving and protecting her environment. The indigenous peoples from time immemorial had adopted different traditional methods directed at protecting and sustaining development such as the bush fallowing, crop rotation, shifting cultivation of farm lands were methods adopted at protection of their land from being over used.

In various indigenous communities in Nigeria, land ownership is corporately owned particularly among the Yorubas of Western Nigeria and Igbos in the Eastern part of Nigeria. As such, the head of the family was in charge and allocated it to members of his family and community for various uses. The larger portions of the lands were reserved for farming and hunting of animals, religious/rituals consultation with the evil spirits as the need arises. However, some of these practices remained during colonial era and some of them are sparingly found in some core indigenous areas of Nigeria's big cities and towns.

3.3.1 Classes of Landmass

During the pre-colonial era, the indigenous people classify and zone their landmass into three major parts, thick, lower forests and grooves

- (i) The lower forests are meant for fencing, building of houses and equally served the purposes of social needs.
- (ii) The thick forests unlike the lower forest are not utilized for cultivation or used for any economic purposes. But "serve as buffer for variety of purposes and

constitute significant harbingers for useful medicinal plants and herbs”
(Amokaye G. O. 2004: 70)

The non-cultivation of thick forests connecting preservation of the forests, as a result, the issue of deforestation cannot be addressed. The thick forests are left uncultivated. Among the Yorubas, most of these forests were reserved for various functions. Some were preserved for hunting of games. That is, some forests were meant for very big animals that are wild and difficult to hunt, while others were reserved for ordinary hunters, but specialists in the area of hunting games. At interval, any hunter who is looking for a number of dreadful or wild animals would be directed to the specialized forest to hunt for them. It is the belief of Yorubas that any hunter who is not sure of himself must risk going into any of these thick forests. Regardless of the hunter tactics in the field of hunting, he must arm himself with trusted and efficacious traditional medicine before attempting to enter the thick forests to hunt wild animals such as buffalo forests, elephant forests, tiger and lion.

3.3.2 Grooves

This is a well preserved forests for the observance of customs and religious rituals, where some sacred plants, sacred animals are kept. It is forbidden for anybody to attempt to destroy them.

The sacred trees are regarded as possessing one spirit or god. These plants that posses spirits cannot be felled except as directed by gods after due consultation and approval with the spiritual realm. For example, iroko tree among the Yorubas. These forests are preserved for diverse use, it protect the people and served a useful defence in the time of war during the pre-colonial era.

4.0 Conclusion

This unit contained three major sub-topics and has been thoroughly discussed to satisfy the student's yearnings. That is, the meaning of the basic concepts of environmental law, the African and Nigerian concept of environment and environmental protection. Apart from the fact that there is no universal definition of the term; the African indigenous people had their own way of preserving their own environment.

5.0 Summary

It is worthy of note that African traditional people and Nigerian indigenous people have their own very unique way of preserving natural life around them for the betterment of their unborn generation, preservation of natural life. The indigenous people in their own world in those days were civilized in dealing with their environment

6.0 Tutor Marked Assignment

- (1) Define environmental law?
- (2) Discuss the proclaimed system of preserving and protecting African/Nigeria indigenous environment?

7.0 References and Further Reading

- (i) Elias T. O. (1971) *Nigeria Land Law* (4th edn.) London Sweet and Maxwell, p. 73
- (ii) Ikhide Eligheghia (supra)
- (iii) Ola C. S. (supra)
- (iv) Atsegbua (supra)
- (v) Andrew Waite and Tim Jewell (supra)

UNIT 3

CONCEPT OF ENVIRONMENTAL LAW IN NIGERIA

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Content
 - 3.1 Concepts of environmental law in Nigeria
 - 3.2 Concepts of environmental law in post 1988
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

Environmental law has been variously defined by various environmental scholars. This is well discussed in Unit 2 of this Module. The evolution and development of legal tools, machineries and strategies to maintain a balance between man's perpetual occupation and the ecosystem is no doubt apposite. Therefore, environmental law has been described as comprising "legal strategies and procedures designed to combat the pollution, abuse and neglect of air, earth, and water resources" (see Encyclopedia Americana, 1995). Environmental law in Nigeria shall be looked into from two angles, pre-1988 and the post 1988 respectively.

2.0 Objectives

The basic objective of this unit is to let the student know specifically the concept of environmental law in Nigeria, from pre-colonial/colonial and post independence to 1988 and beyond (till date). Equally emphasized is pollution and the environment.

3.0 Main Contents

3.1 Concept of Environmental Law in Nigeria

As elucidated before in the previous units, that it was not the colonial regime in most African countries that introduced environmental law or protection. It will be unfair to Nigerian (Africans) to categorically state that the history of sanitation and protection of our environment started during the colonial era.

However, the concept of environmental law as witnessed during the colonial administration was generally characterized by political and economic gains of the colonial leaders. No wonder a learned scholar stated that “laws which would have in any way restricted economic activities or imposed additional responsibilities on them (colonial Administrator) by way of environmental requirement would probably have been considered counter productive if not repugnant, this 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” (Nwadozie, K. C. 1994: 2).

In the Criminal Code, there are certain provisions which sanctions on the pains of punishment the flouting of water, air, land, well tanks, reservoir; the burial of corpses within certain yards of a dwelling house. At this time, there was no sanction or the punishment was too mild for some of the violations. In this wise, the development requirement of Nigeria as a young economy justified the turning of a blind eye on some of these problems. Atsegbua et al, stated that the period between independence and 1980 actually witnessed a combination of political and social economic factors which began to enhance the development of environmental law in Nigeria. It was during this time that the concept of environmental law changed. The changes were as a result of sudden growth and development of local industries and foreign companies’ which led to problems connected with industrial waste management. It was this upsurge in the industries that brought about various forms of hazardous waste and pollutants into the formerly quite environment.

Similarly, the discovery of crude oil in the Niger Delta Region shortly after independence, and the attendant oil boom equally exposed Nigeria ill-preparedness for the problems usually associated with individual development. The government is only after the

resource that comes out of the boom and later the boom burst into various pollutions which highly injurious to human health. (Ademola A. Taiwo 2010; NOUN, Environmental Law I)

Due to the new impact brought by industrialization and oil discovery on the environmental policy in the country (Nigeria), a new concept of environmental law had to be developed and articulated. In order to bridge the gap, the then Federal Military Government promulgated the Factories Act, Oil in Navigable Waters Regulation 1968; Petroleum Act, 1969; Petroleum (Drilling and Production) Regulations 1969; Petroleum Drilling and Production (Amendment) Regulation 1973; Petroleum Refining Regulation 1974; and the Oil Pipeline Act, 1956.

As a result of this sudden development in environmental protection policy and the concept of environmental law some years after independence shows that the government was more conscious of the environment than what was obtainable during the period of colonial lords. The change in environmental law concept as a result of prevalence of these laws majorly to protect the citizen's health, the balancing of ecosystem, management of natural resources, problems of socio-economic and political consideration and the problem of inadequate or adequate compensation of pollution victims are the key problem encountered by the current concept of environmental law.

The above argument was corroborated by a learned legal scholar that:

The range of topics under the general heading of environmental law is extensive. It could include planning law, the law relating to the quality of air, and water, the disposal and transport of waste, control of the nuclear industry and statutory nuisances. (See Atsegbua et al, supra).

The Koko toxic waste incident of 1988 motivated serious consideration by government which led to formulation of different policies on environmental law in Nigeria. The incident equally exposed the inadequacy of the previous promulgation and the need to make more broad laws to combat pollutions and dumping of the hazardous waste within and outside Nigeria territorial waters and land space. This no doubt led to the real legislation on environmental protection which was promulgated in 1988 titled Federal Environmental Protection Agency Act (FEPA) Cap 113, LFN 1990 (as amended in 2004).

3.2 Concept of Environmental Law in Post 1988

The post 1988 concept of environmental legislation was as a result of delay on the part of subsequent administrations in Nigeria who regarded and reduced environmental protection issue to the level of domestic wastes as such dissipated a lot of energy in the direction of environmental sanitation. How to deal with bigger environmental factors and its protection were not envisaged.

This fact was supported by Aina and Salau:

“This Environmental Sanitation Syndrome has been responsible to some extent for the obviously low priority given to institution building for the environmental management. This same definition has given rise to the tendency to reduce the failure of environmental sanitation efforts to the lack of discipline among the populace and a preference for ad hoc compulsion to enforce sanitation”.

Another factor that may be responsible for the late response to the call for fight to protect the environment is the instability of government in Nigeria. The regular change in government usually impeded development and environment protection framework development which would have been put in place was impeded. Subsequent governments did not see it as a priority to develop environmental protection along side with Economic planning.

In the third National Development Plan, no correlation between economic and physical planning, it therefore underscored the need and expectation of the citizenry in respect of environmental protection. (Ikhide Eghighehu 2007:6)

For the first time after Koko in 1988, a deliberate and pragmatic conceptual approach was made in formulating a realistic policy. It is instructive to note that:

Since the health and welfare of all Nigerian depend on making the transition to sustainable development as rapidly and possibly, this national policy or the environment provides the concepts and strategies which will lead to the procedures and other concrete actions required for launching Nigeria into an era of social justice, self-reliance and sustainable development as we enter into the 21st century.

With the above factor, there is the need to establish an administrative and enforcement body that will overseas all environmental related problems in water, air and

land – forests, and wild animals: A body in the nature of FEPA was proposed and eventually established. It equally established at state levels bodies called State Environmental Protection Agency (SEPA). This is because environmental issue is under the concurrent list. That is, the federal government and states have right to legislate on it.

Nigeria policy on environmental protection since then is in tune with international requirement and standards. Upper Brink (a German Environmentalist) contributing to the need for environmental protection through law, posited *inter-alia*:

“The protection of man and the environment from harmful effects resulting from all substances introduced into the atmosphere, water or soil requires the formulation of a comprehensive and interdisciplinary concept... to comprise general objective and principles of protective actions”

This idea cannot be effective without instrument of law deliberately put in place to protect the environment.

To this extent, it is worthy of note that Nigeria has arrived in terms of laws to combat environmental hazards and pay adequate compensation to the victims of the pollution.

It was included in the 1999 Constitution of FRN particularly Section 20. A Ministry has been created – Ministry of Environment at both national and state level respectively to deal with environmental protection. FEPA with more responsibilities changed nomenclature to become National Environmental Standards and Regulations Enforcement Agency Act (NESREA), 2007. It has branches in all the states of the Federation. Its areas of coverage includes, monitoring, reduction and possible prevention of environmental pollution (Atsegbua et al).

4.0 Conclusion

In this unit, the concept of environmental law in Nigeria in pre-1988 and Post 1988 was discussed. Nigeria has become more aware of international treaties, conventions and collaborations relevant to environmental protection in its efforts to forestall permanently a repeat of the Koko Toxic Waste incident. Nevertheless, environmental law should not be confined to areas of sustainable development of the environment only, but include right of

man to live in healthy, hygienic and safe environment. It should be part of third generation rights which should without hesitation be inserted in the Constitution.

5.0 Summary

It is worthy of note that for a proper sustainable environment to be achieved there must be adequate law on ground and enforcement body as we have in NESREA. All the laws put in place before 1988 were toothless, and dealt with matters of environmental sanitation. But the incident of 1988 made the government of Nigeria looked beyond her shoulders and promulgated FEPA. Since FEPA has metamorphosed into Ministry of Environment in 1999 and NESREA in 2007, as an institution it has been doing well in performing her own bit. More performances are expected in the area environmental protection and human health as a right.

6.0 Tutor Marked Assignment

- 1) Enumerate the factors that contributed to the delay in promulgating a broader legislation beyond environmental sanitation.
- 2) Identify and discuss the stages of environmental law concept in your country.

7.0 References and Further Readings

- 1) Atsegbua et al (supra)
- 2) 1999 Constitution (supra)
- 3) Amokaye G. O. (supra)
- 4) Ikhide E. (supra)
- 5) Ola C. S. (supra)
- 6) Fagbohun; Reappraising the Nigeria Constitution for Environmental Management, AAU Law Journal, vol. 126
- 7) Aina T. A. and Salau A. T. (1992) Challenges of Sustainable Development in Nigeria (NESTS) Edited Work

UNIT 4

THEORIES OF ENVIRONMENTAL LAW AND CHALLENGES

1.0 Introduction

2.0	Objectives
3.0	Main Contents
3.1	Theories of Environmental Law
3.2	Challenges of Environmental law
4.0	Conclusion
5.0	Summary
6.0	Tutor Marked Assignment
7.0	References and Further Readings

1.0 Introduction

Theory is a concept or ideas, principles and methods used to explain a wide set of observed facts. Environmental law is a concept that has many ideas, principles about human, animals, wildlife and various species of plants. It deals with how living organisms can sustain, protect and develop their environment where they find themselves. It is all about economic development; deep ecology; sustainable development; and the challenges.

2.0 Objectives

The objective of this study is to let the students know that:

- (i) Environmental law is a multi-dimensional course;
- (ii) Environmental law is a concept related and associated with variety of theories
- (iii) Environmental law is promulgated to address challenges facing the environment

3.0 Main Contents

3.1 Theories of Environmental Law

Environmental protection is a concept associated with a variety of theories about mankind and the environment. These theories on environmental protection can be summed up into three schools namely;

- (a) the school of economic growth
- (b) the school of “deep” ecology and
- (c) the school of sustainable development

3.1.1 (a) Economic Growth (Development)

The school of economic growth is otherwise regarded as school or theory of “development”. The theory of economic growth according to Amokaye G. O. (2004:10) is anthropocentric in nature and has its root in the biblical concept of human dominion over nature and its exploitation for exclusively human ends. That is, Genesis 1 verses 27 – 30 and Psalm 115 verse 16 stated that “heaven belongs to the Lord alone, but He gave the earth to human race”. These Christian injunctions provide the moral legitimacy for human dominance over nature which becomes the accepted goal of human endeavour. This concept which was coined and popularized by the duo political theorist Immanuel Kant and St. Thomas Aquinas is traceable to Plato, who posited that “man is the measure of all things”.

The anthropocentrism believed that man is the central unit in the environment and the key actor among other inhabitants of the environment. This dominion concept was later articulated and transplanted to mechanistic view to advance the course of industrial revolution by the earlier theorists.

In furtherance of this principle, Francis Bacon who lived between 1561 – 1626 postulates that ‘all creation had meaning only in relation to humanity; “man, if we look to find causes, may be regarded as the centre of the world in as much that if man were taken away from the world, the rest would seem to be all astray, without aim or purpose”. Bacon perception of the earth as a very fertile gift of nature ready to unlock through scientific means.

Thomas Hobbes, a seventeenth century political philosopher (who lived between 1588 – 1679) believed in the validity and supremacy of individual human interest over and above general interests in a society or environment. He sees the human life as “short, nasty, brutish and melancholic”. He stressed further that human beings usually fight one another to gain one advantage or the other over themselves. He concluded by advocating to prioritization of available resources instead of even distributing the resources, so that it will drastically reduce fighting and hatred among the people.

To an economic theorist, and father of modern economics (who lived between 1723 – 1790) propounded the theory that objective laws control economic life, as Isaac Newton in his Newtonian physics coined the laws of nature. In his view, the economic freedom of

people in self interested pursuit would automatically contribute to common good. Man is more egocentric and thinks much about his own interest than the common interest of the environment.

As a result of man exploits to satisfy his interest perpetually exercise his domain over the earth through daily exploitation of environment and its natural endowments (resources) to himself and for himself only; even tough his sustenance depends solely on the degree to which he can exploit this environmental physical nature in his surroundings.

The following four basic components of the physical environment are subject to the influence of human being in the process and means of economic growth and development. As a result the perspectival views were formulated:

- Man, who also comes from nature is entitled as dominant constructor to transform the lithosphere and biosphere at will into a man-made world that promises an abundance of material goods;
- There is no natural obstacle to this, although, the population will stabilize in times to come, it can meanwhile multiply without fear because the earth can support an unlimited number of people;
- These sufficient natural resources and in any case technology will discover new ones if the existing ones runs out;
- There is no environment crises and the alleged dangers are scientific myths; all environmental problems will be dealt with successfully with the aid of technology; and;
- Consequently, production and consumption can increase indefinitely and there is no good reason to restrict them.

CRITIQUES OF ECONOMIC GROWTH THEORY

- (a) Be that as it may, the economic growth theory has been criticized as too anthropocentric and equally extreme in approach. And its developmental position has been debunked scientifically.

- (b) However, the ecologist school of thought in a similar vein argued that man does not dominate nature as postulated by the economic growth theorists; instead, the relation is interdependent with it so far as the man's intervention has a special feedback within the man-made systems; which in turn affects their stability.
- (c) The resources are finite and measurable and unlimited consumption cannot last for a long time.
- (d) Human population explosion must be seen as an acknowledged problem; although it is under management by the United Nations.
- (e) The global environment crisis is a proven fact and its main manifestations – climatic change; ozone layer depletion; global warming are already the major objects of action plans.

3.1.2 “Deep” Ecology Theory

The second school of environmental law theories is that of “deep” ecology theory. The advocates of this theory are concerned with return to simple ways of managing nature. The theorists are egocentric in approach. They are primarily and traditionally concerned about non-human nature and the totality of ecosystem, as opposed to humans as its purpose. To the ecologists, theorist, human beings are morally obliged to respect plants, animals and all nature, which have a right to existence and human treatment. The Ecocentrists posited that the entire world as living and self-regulating organisms and rejects the dualist view of human and nature as separate and distinct. The propounder of this theory perceived man and his natural environment as partners in progress rather than nature existing for satisfaction of man's selfishness interests. Man and nature co-exist to help regulate and balance the planet. The main focus and the interest of the theorists are evolutions, ecosystem and the conservation of species, without placing any burden on man. The school emphasizes the right of man, plants, animals and natural inorganic elements as well. As a result man owes his existence and respect to nature and all other creatures.

Critiques of the theory:

- (a) The school of ecology was too extreme because it is one-sided.
- (b) Despite the numerous contributions, they were in the error of market autonomy.

- (c) The value of this school is not in the extreme conclusion that it advocates but in its highlighting the very important role played by ecosystems as the irreplaceable bases for man-made systems
- (d) The man-made environment and nature are far apart. Man-made systems are one thing and ecosystems another.

3.1.3 Sustainable Development Theory

The first two schools of Economic Growth and Deep Ecology are seen as too extreme due to the fact that they regarded as one sided. The school of Economic believed in isolations of man from his environment, while the second, Deep Ecology Theory focus on holistic and concentrate on ecosystem. It ignored the unique qualities that distinguish mankind from all other living organism. The ecology theorist rejects human uniqueness qualities and promotes uniqueness of the ecosystem; and forgot the necessity to harmonizing ecosystem and man-made systems; that is corporation existence of nature and cultural development. As a result, man must survive and his survival is based on technological development characterised by the building of industries/factories, smelters, oil refineries machinery, mining and blasting; even though at times at the expenses of other elements in the vicinity of his occupation.

The sustainable theory came to address the differences between two former theories. Development thinkers primarily recognised as the process by which a state or nation provides for its entire population, all the essentials by life such as health, housing, economic opportunity, nutrition and create enabling atmosphere to allow every adult to participate and contribute his own quota through gainful employment. The theory promotes and encourage the national government authority facilitate the construction and maintenance of the infrastructure and mechanism which perpetuate the production and its base of the nation for the present and future times.

The above is in accordance with the United Nations Declaration on the Right to Development and all right of all people to enjoy the Right of Self determination and an individual's right to enjoy a minimum quality of life (See 1986, Declaration on the right to Development; United General Assembly (UNGA) Res 41/128 Annex); J. C. Dembach,

analysis the nexus between development and sustainable development and calling for integration into national government

The declaration defined development as a comprehensive process that involves political freedom and equality of opportunity for all to basic resources, education, health services, food, housing, employment and the fair distribution of income. The Declaration states that all human beings are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realised (Amokaye G. O. supra)

The Development theory covered a broader international level with four concepts; peace and security; and national governance that secure peace and development. Sustainable development can be defined as follows; it is an increase in a country's wealth production, that is, the gross income, which does not entail parallel reduction or degradation of its natural capital.

Brundtland described development as that, which meets the need of the present without compromising the ability of future generations to meet their own needs, and sustainability is identified with the conservation of the ecosystem as a perpetual source of natural resources for man. That is, there is sustainability of the ecosystem if there is restraint and reasonable exploitation of the ecosystem by man for whatever development. He reiterated further, that, sustainable development consists of

- (a) Conservation and recovery, where necessary of the adequate natural capital to support a qualitative development policy and
- (b) Inclusion of environmental, cultural, social and economic criteria in the planning and the implementation of development policies in both public and private sectors.

CRITIQUE OF THE SUSTAINABLE DEVELOPMENT THEORY

- (i) The theory primarily deals with two broader areas that make the prescription very clumsy and tedious to understand.
- (ii) The theory no doubt over generalizes the harmony between, the natural resources in his environment.

4.0 Conclusion

In this unit, we have attempted to discuss the theories of environment law and environmental protection. These theories are economic theory, 'deep' ecology theory and sustainable development theory. These theories are germane to the understanding of environmental protection.

5.0 Summary

It is observed from the above outline of the theories there is no one without its criticism. The totality and emphasis were laid on the organisms and environment particularly, the role of human being in maintaining, protecting and sustaining the environment. Man's survival equally depends on the quality, uniqueness of the environment he finds himself.

6.0 Tutor Marked Assignment (TMA)

- (a) Identify the theories of environmental law.
- (b) Discuss in detail the above identified theories.
- (c) Highlight the criticisms against these theories.

7.0 References and Further Readings

- (1) Amokaye G. Oludayo (Supra)
- (2) Wikipedia (internet material) 28th July 2011
- (3) United Nations Environment programme (UNEP) Global Environment outlook 2009.
- (4) 1986 Declaration in the fight to Development UNGA Res 41/128 Annex (Dec. 4, 1986).

MODULE 2

PUBLIC HEALTH RIGHTS AND ENVIRONMENTAL LAW: NIGERIAN CITIZENS' RIGHTS TO ENVIRONMENTAL QUALITY

UNITS

1. Rights of Citizens to Clean Environment
2. International recognition of Environmental Rights
3. Rights of Citizens to Life and Property
4. Right to Good Health, Safety and Welfare
5. Factory Protection Legislation
6. Public Health

UNIT 1

RIGHTS OF CITIZENS TO CLEAN ENVIRONMENT AND CITIZEN'S RIGHTS TO ENVIRONMENTAL QUALITY

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main contents
 - 3.1 Principles of Human Rights
 - 3.2 Environmental Rights to Quality Environment.
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assessment (TMA)
- 7.0 References and Further Reading

1.0 Introduction

It has only been in the past few decades that man has begun to realize that the pollution on the environment has become so intense that the natural assimilation, sustaining and self-cleansing capacity of the environment, though tremendous has a limit. And this has started showing signs of strong stress to human and animal's health which indirectly affecting people's rights to good environmental quality (Boljeet, S. Kapoor, 2001:1)

As a result, most legal mechanisms to combat the menace of pollutions are grossly inadequate. The inadequacy of these existing legal mechanisms to protect man and the environment from the excesses of modern technology propelled the call for environmental rights as a separate and distinct right to address this incursion. (Okanmah, P. D. 1997: 61)

What is right? A right is an interest or an entitlement to something recognised and protected by the law, respect for which is a duty and disregard of which is wrong (Osborn's

Concise 1993: 293). “Rights refer to that which is first or correct truth, fairness, justice, just and legal claim. To this extent, it connotes an entitlement to a clean and healthy environment.

However, Atsegbua *et. al.*, posited that a right to a clean and healthy environment is the right of everyone to the conservation of his/her environment, free from the degrading effects of pollution and other human activities. To give recognition to human survival depends upon a safe, secured and healthy environment. To achieve this goal of a clean healthy and sustainable environment can be found now in the Human Rights provisions (Okanmah, P. D.; Atsegbua *et. al.*, (supra)).

2.0 Objectives

At the end of this unit, the readers would be able to

- define the term ‘rights’ and ‘human rights’
- environmental right to quality environment.
- essence of environmental rights to man and animals

3.0 Main Content

3.1.1 Principle of Human Rights

Human Rights as principle means the freedom, humanities and benefits that according to modern values, all human beings should be able to claim as a matter of right in the society in which they live. It is quite regarded as natural law on every human being. These are not the particular privileges of citizens of certain states but something to which every human being, everywhere, was entitled by virtue of simple fact of being human or rational.

Dakas C. J. noted that when he re-echoed Arnold Lien definition that Human right are universal rights attaching to the human being whenever he appears without regard to time, place, colour, sex, parentage or environment. Atsegbu *et. al.*, concluded, that, human rights are derived from the inherent dignity of the human persons. They are rights accruing to an individual because he is a human being.

Though Human Rights is a relatively new term in the Nigerian Lexicon. However, the 1999 Constitution recognized the fundamental human rights through the Fundamental Human Rights through the provisions in Chapter 4, sections 33 to 46 of 1999 Constitution of Federal Republic of Nigeria (as amended in 2011). Other varieties of rights are also enshrined in the constitution for benefit of the people (Damian Ugwu (2004: 1))

With this fact, human rights protection is a feature of constitutionalism. Human rights in this perspective is a modern and universal term. It involves principles that are as old as humanity; these basic principles are to be found not only in Christianity, Confucianism, Buddhism, Islamism (African deities) and Judaism but also found in various local cultures and systems. (Polis A. and Schwab P. 1980).

SELF ASSESSMENT TEST

- Briefly analyse the principle of Human Rights?

3.1.2 Why Human Right is an international principle?

As rightly claimed, the concept is an international principle. Indeed, most, if not all world ideologies espouse it. The evolution of the principle cuts across civilizations. It was introduced in 1689 by the British Constitution: Bill of Right of that year. The United States Declaration of Independence of 1776 corroborated this fact. This was adopted by congress on 4th July 1776 and *inter alia* said “we hold these truths to be self evident that all men created equal, that they are endowed by their creator with inalienable rights that among these are life, liberty and pursuit of happiness”.

The gross abuse of human rights committed against Jew by Nazi Germany led to a repulsion and a denomination to ensure their protection and promotion as a fundamental aspect of post-war governance for all people’s without discrimination. The United Nations Declaration of January 1942 signed by Britain, China, USA, USSR and twenty one others states recognised the obligation of members to preserve human rights and justice in their own as well as in other lands. It is interesting to include that the ground was well-prepared for the inclusion of human rights in the UN Charter ratified in 1945 (Umezurike U. O. (2007). The preamble of the charter reaffirms “Faith to fundamental human rights, in the dignity and worth of the human person, the equal rights of men and women and of nations large and small”. The development of infrastructural human rights law is generally related

to the Second World War. The war, the UN was established to “save succeeding generations from the scourge of war ... and to reaffirm faith in fundamental human rights” (See Preamble of the United Nations Charter).

In addition, the US Charter, which represents the constitution of the organization is also an international treaty. The UN Charter of 26 June 1945, 59 state, 1031, TS. 993, 3 Bevaus 1153; a certain number of references to human rights. The preamble of the Charter stated: “We the people of the United Nations, determined ... to reaffirm faith in fundamental human rights, in the dignity and worth of human person, in the equal rights of men and women and of nations large and small ... have resolve to combine our effects to accomplish these aims”.

SELF ASSESSMENT TEST:

- Is Human Rights an international concept?

3.1.3 International Convention (Treaties, Agreements, and Protocols).

After the inception of this principle, several conventions have concluded to” protect particular human rights. The reference in Article 38 (1) (a) is directed to international treaties, which are also varying described as covenants, charters, pacts, protocols and conventions

Examples of treaties are:

- i. International Covenant on civil and political rights 1966, 999 UNTS, 171;
- ii. International Covenant on Economic, Social and Cultural Rights 1966, 993 UNTS, 3
- iii. International Convention on the Elimination of All forms of Discrimination 1966 UN, Treaty Series, vol. 660 p. 195
- iv. Convention on the Elimination of All Forms of Discrimination against women 1979 UN, Treaty Series
- v. Vienna Convention on the Law of Treaties 1969
- vi. Convention on the Prevention and Punishment of the Crime of Genocide 2002
- vii. The European Convention for the Protection of Human Rights and Fundamental Freedom (1950);
- viii. The Inter-America Convention on Human Rights (1970) and

ix. The African Charter on Human and Peoples Rights (1981)

From the afore discussion, it is crystal clear that the evolution of human rights is collective reasoning, plus natural endowment and implementation over many centuries. Establishment of Human Rights surpasses human history and Biblical Age. In this wise, it is no doubt, human beings are the major beneficiaries of the principle of human rights which are both natural and artificial.

3.1.4 What is Rights?

At this junction, what is the concept “right”? It is an interest recognised and protected by the law, respect for which is a duty and disregard of which is wrong (Salmond). A capacity residing in one man of controlling, with the assent and assistance of the state, the actions of others (Holland). See further Osborn’s Concise Law Dictionary 1993: 293. Atsegbua *et al.*, typologised the meaning of ‘Rights’ into two special moral importance; that is, “it may refer to something that is normally correct or demanded by the fact that it is a right”. Secondly, ‘it may refer to the entitlement of a person; the special title one has to a good or opportunity’. The first and second meanings especially the first one, refers to moral standards, righteousness and moral rectitude.

Human Rights according to Professor Osita Eze, “Human Rights represent demands or claims which individuals or group make on society, some of which are protected by law, while others remain aspirations to be attained in future”.

Human rights are naturally inherent in man as a result of the fact that man is a social animal and man has contributed little or nothing to bring it to being rather protect it and ensure its manifestation. It is the rights which all human beings enjoy by virtue of their beingness (humanity) regardless colour, race, regions or continent, the deviation, deprivation and neglect of which would constitute a grave affront to one’s natural sense of justice and government must not negligent in protecting the rights.

3.1.5 Generation Concept of Rights

Human Rights Experts have classified Rights under three concept of generation. Karel Vasak introduced the concept of generations in 1997 into the corpus of human rights discourse. Since then, the debate has taken many forms and shapes. The researcher traced the genealogy of human rights. The term ‘generations’ has been customarily used to

differentiate different types of rights. At the end of this three basic generations of rights, according to Vasak, the first generations is called *Liberte* (Liberty). This refers to traditional civil and political rights.

3.1.5.1 First Generation Concept of Rights include freedom of speech, freedom of religion, freedom of press, freedom of torture, freedom of assembly, security of person and right to life. These rights are inviolable by government against individuals either within or without. These basic and fundamental human rights are found in many bills of rights of the constitutions of many nations across the world.

The first generational concept, they relate to the sanctity of the individual and his rights within the socio-political perspective in which he finds himself.

3.1.5.2 Second Generation Concepts of Rights was termed by Vasak as *egalite* (equality). This requires the affirmation of governments for its realisation. These rights are Economic, Social and cultural rights. These in turn are equally referred to as “Collective rights” or group rights. These are positive rights in that they enhance the power of government to do something to the people to enable them or him in some ways. These rights are generally interpreted as pragmatic clauses, obligating government and legislation to pursue social policies, but do not create individual claims.

3.1.5.3 Third Generation Concept of Rights. This aspect focus largely on individuals. These rights include the right of people and groups. This is the most recently recognised class. These include, the right to peace, and right to a healthy environment (Atsegbua et al).

In accordance with the human rights experts, this category has received increasing rhetorical affirmation at the international level through “only the disposal of natural wealth, included in the international covenants have received authoritative acceptance in international law”. These rights include “the right to development, the right to peace, the right to environment, the right to ownership of the common heritage of mankind, and the right to communication”.

Self Assessment Exercise

- Define Human Rights?
- Discuss the concept of generation

3.2 Environmental Rights

A right has been defined above in paragraph 3.1. In that wise, environment means the air, water, and land, forest and wildlife of Nigeria. The Cambridge International Dictionary of English defines the environment as follows;

“Surroundings, the condition that you live or work in and the way that they influence how you feel or how effectively you can work”.

This definition fits the perception of the lawyer. However, for purpose of environmental protection, the question of man and his surroundings do not play as prominent a role as they do in the definition given above. To the best of many writers knowledge, ‘environment’ has a lot more to do than with the situations that we live in and work in.

In addition, the Cambridge Dictionary went further to give second definition of the environment as follows:

Nature, the environment the quality of air, water or land in or on which people, animals and plants live.

This definition is a little bit broader in its description of what are the constituents of environment instead of focusing on people and his natural habitat.

The Black’s Law Dictionary defines environment as “the totality of physical, economic and cultural, aesthetic and social circumstances and facts which surround and affects the desirability and value of property and which also affects the quality of peoples lives”. The surroundings conditions, influences or forces which influence or modify.

This definition is not total, though it takes the subject matter on a very broad base but is deficient in a material respect because it refers to social circumstances and factors which affect desirability of property and also the quality of people’s lives. It concerns much on the sustainability of man in the environment than the sustainability of the environment itself. (Ikhide Ehighelua 2007:2)

The NESREA defines ‘environment’ Section 37. Also Section 20, 1999 Federal Constitution of Nigeria, defines environment to mean:

- (a) The water
- (b) Forest and wildlife

- (c) All layers of the atmosphere
- (d) All organisms' and inorganic matter and his organisms, and
- (e) Interacting nature system that includes the components referred to in paragraph (a)-(d)

To this extent, it is very clear that the concept environment mean no more than the air, water, land, forest and wildlife of Nigeria or other nations. All these definitions regard the environment as a state of affairs which is based upon the activities of man in his natural habitat and the interaction within his immediate environment in terms of water, air, animals, forest, land and so forth.

The main focus of these definitions shows the need to protect human health, safety and interest. It requires the maintenance of certain level of environment either collectively or individually. This is as a result of the way the environment is to be taking care of. Therefore, healthy, hygienic and clean environment becomes Human Rights.

The rights to environment complete the other rights guaranteed to each human being (Atsegbua *et al*). For a healthy and balanced environment and environmentally sound management of natural resources which is the condition requisite for the implementation of other fundamental right, man has to put his weight behind sustaining the environment and keeping it healthy all times. Such rights would include powers to sue in civil courts for damages caused by pollution and to initiate private suit or claim for pollution where government has refused bluntly to act.

SELF Assessment Test

- Are environmental Rights, human rights?

4.0 Conclusion

Human Rights is a universal concept. It is a concept which no law can invalidate or erase. This unit discussed the meaning and the different struggles by all community, groups to make environmental right a universal phenomenal.

5.0 Summary

In this unit, we learnt about the following:

- (1) Brief history or origin of human rights and its definitions
- (2) Identify and discuss the classes of human rights
- (3) Establishment of rights to quality environment

6.0 Tutor-Marked Assignment

- (i) “The concept of human rights has been variously defined by scholars and commentators” Discuss the various shades of opinions in respect of Human rights.
- (ii) Elucidate the concept of generation of rights under the classification of rights.
- (iii) Briefly discuss the term Environmental Rights.

7.0 References and Further Readings

- 1) Black’s Law Dictionary 9th Edition
- 2) Osborn’s Concise Law Dictionary 1993, London, Sweet and Maxwell.
- 3) Dakes C.J (1996) The implementation of the Africa Charter on Human and Peoples Rights in Nigeria.
- 4) Introduction to Human Right Cultural and Ideological Prospective ixv.
- 5) Umezurike (2007) Introduction to International Law 3rd edn. Ibadan, Spectrum books.
- 6) Atsegbua et al. (supra)
- 7) Ikhida Ehighela (2007) Environmental Practice Law Affirm, War page Law. p. 2 and 3.

UNIT 2

INTERNATIONAL RECOGNITION OF ENVIRONMENTAL RIGHTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 International Recognition of Environmental Rights
 - 3.2 Environmental Pollution violation of Human Rights
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor-Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

The spread or advocacy of environmental rights protection is given recognition at international level than any other existing levels where the gospel of Environmental rights protection is being spread or advocated. That is, there is international recognition between the environmental rights and human rights. No wonder Stockholm Conference posited that man has a fundamental right to freedom equality and adequate conditions of life, in environment of quality that permits a life of dignity and well being.

2.0 Objectives

At the end of this unit, the students and readers would be able to know:

- The recognition of environmental rights at international level
- Whether environmental pollution constitutes a violation of human rights?
- Some rights that are salient to environment

3.0 Main Contents

3.1 International Recognition of Environmental Rights

There is an international and world wide acknowledgement of the link between human rights and environmental rights protection. There is no doubt about it that good healthy and secured environment determines to a large extent survival of all living organisms residing in it. As a result, the Stockholm conference particularly under Principle

1 states that; man has a fundamental right to freedom equality and adequate conditions of life, in environment of quality that permits a life of dignity and well being (see Rio De Jenerio 1992). In the similar vein, the Hague Declaration of 1989 has also stated “the right to live in a viable global environment’, (see Declaration of Hague March 11, 1989).

United Nations Organisation (UNO) is not left out in the campaign and recognition for environmental protection. In that wise, a right to a good healthy environment is included in the UN Environmental Programme 1993 which determines basic law on environmental protection and the promotion of sustainable development. The governing principles provides for the right of present and future generation to enjoy a healthy environment and decent quality of life for both man and animals.

In furtherance of this, the United Nations, Sub-Commission on Prevention of Discrimination and Protection of Minorities, 1994 published a report on the relationship between human rights and specifically the environment (See UN Sub-Commission First Progress Report, UN Dec. E/CN. 4/Sub. 2/1992/7,428. The UN Sub-Commission conducted a research where over sixty nations constitution across the globe were studied specifically the provision relating to environmental protection and human health, it was discovered that all these constitutions studied recognise and place the state under a duty to protect the human right to a satisfactory environment

In the final report of research of the Sub-commission revealed that an acceptance of environmental rights at national and international levels concluding that there had been right to “a shift from environmental law to the right to a healthy and decent environment” and since this right was part of existing international law. However, the substantive elements of the right, it seems, include the right to development, life and health. The right also implies a right to the due process of law, to public participation in environmental decision-making and to have access to effective material remedies (Atsegbua 2010: 171 – 172)

SELF ASSESSMENT TEST

- Briefly discuss international recognition of environmental rights

3.2 Environmental Pollution: A Violation of Human Rights?

Ordinarily, Environmental Pollution according to Hodge is “the introduction by man into the environment 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”.

In 1974 the World Health Organization limiting the guide-lines for determining whether environment is polluted noted that:

The environment is polluted when it is altered in composition or condition directly or indirectly as a result of the activities of man so that it becomes less suitable for all or some of the uses for which it was naturally suitable.

From legal perspective, pollution is the wrongful contamination of the atmosphere or of water or of soil, to the material injury or damage to the rights or property of people. Environmental Pollution is breach of man right to live in a clean-healthy environment caused by manmade or man aided alteration of chemical or physical or biological quality of the environment to the extent that is detrimental to it. Man deserves to live in an environment that is devoid of all these contaminants/pollutants.

Pollution therefore occurs in relation to activities of man on land, water and air which include mining, road uses/vehicular movement, exploration and use of petroleum and its by-products. As a result of these activities, damages were inevitably done to marine life, wildlife habitats, farmlands, shrines, recreational breaches, property and other social amenities. The pollution of environment through various polluting agents may indeed show the relationship between development, pollution and environmental protection.

However, UN Conference on Human Environment held at Stockholm declared that

“in developing countries, most of the environmental problems are caused by underdevelopment, millions of people continue 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. A situation where a particular activities alters the environment and radically affects the way of life and economic well-being of these who live within its vicinity, or poses danger to their

health and life, is the threshold at which the right to a clean environment is breached.

These rights which environmental pollution affects are numerous that is;

- Right of life
- Economic, Social and Cultural Rights
- Right to Health
- Right to dignity of human person
- Right to personal liberty
- Right to private and family life
- Right to peaceful assembly and associate
- Right to freedom of movement
- Right to protection from compulsory acquisition of private property

All these rights and others are recognised both internationally and in the most nations' constitutions

4.0 Conclusion

In this Unit, the issue of environmental rights and human rights are very vital matter and very germane to healthy and sustaining human beings and his environment. It is well recognised in international comity of nations as an important concept. On the other hand, environmental pollution is a violation of Human Rights. This was as a result of human activities and uses of natural gifts in his surrounding. The area of rights affected by the pollution shall be discussed in the next unit.

5.0 Summary

From the above perspective, the following aspects of environmental law have been discussed:

- (i) Environmental rights;
- (ii) Recognition of environmental rights worldwide and;
- (iii) Violation of human rights as a result of activities of man which results into environmental pollution and highlights of those rights affected by environmental pollution.

6.0 Tutor Marked Assessment

- (i) Identify some rights usually violated by the environmental pollution due to activities of man
- (ii) Evaluate the contribution of UN and other international organizations to the protection and sustainability of human and his environment.

7.0 References and Further Readings

- (i) Atsegbua *et al.*, (supra)
- (ii) Akanle, O. (2005). "Pollution Control Regulations in the Nigeria Oil Industry as cited in Okonmah's Work
- (iii) Dharmendra S. Sengor (supra)
- (iv) Ikhide Eghighelua (supra)

UNIT 3
**RIGHTS OF CITIZENS TO LIFE, PROPERTY RIGHTS, ECONOMIC, SOCIAL
AND CULTURAL RIGHTS**

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Rights of Citizens to Life
 - 3.2 Property Rights
 - 3.3 Economic, Social and Cultural Rights
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (TMA)
- 7.0 References and Further Reading

1.0 Introduction

The right to life is the fulfillment of the most fundamental human needs and is dependent on various variables of the environment. It is the most essential among all other rights.

The other elements of the right to life are air to breath, water to drink, food to eat and shelter for protection and quality of the duty to protect life rests squarely on the state. It is therefore the responsibility of the state to protect and prevents the action that will cause degradation. The 1776 the United State of America Declaration of Independence and War posited that “life” is one of the inalienable rights (and must be protected by the state).

See Chapter 4, sections 33 to 46 of 1999 (and 2011 as amended) corroborated this fact as regards the importance of right to life.

However, shelter is very important to human life as right to life is to every individual. This is subject to the provisions of this condition; every citizen of Nigeria shall have the rights to acquire and own immovable property anywhere in Nigeria.

2.0 Objectives

At the end of this unit, students and interested readers would be able to;

- (i) Identify the fundamental human right provisions that concern this unit and
- (ii) Know the relationship of these rights with environmental studies

3.0 Main Content.

3.1 Right to Life.

Apart from various sections of the constitution, the African Charter on Human and People's Rights 1981 links rights to environment and development, particularly Article 24 which states that "All peoples shall have the right to a general satisfactory environment favourable to their development and states shall have the duty, individually or collectively to ensure the exercise of the rights to development".

It can be deduced from the analysis above that the international recognition of the right to environment entails beneficial rights for all and sundry.

The European Convention on Human Rights, Article 2, discussed right to life in line with convention that:

"Everyone's right to life should be protected by law. No one shall be deprived of his life intentionally save in the execution of a sentence of a court following his conviction of a crime for which the penalty is provided by law".

Article 2 of the Convention protects the most fundamental of human rights, the right to life. The right cannot be derogated from even in times of war and other public emergency, except in respect of deaths resulting from lawful acts of war, but under Article 2(2) the taking of a person's life can be justified when it results from the use of force which is more than absolutely necessary, in order, for example, to effect a lawful arrest See **Pretty v. United Kingdom (2002) 35 EHER 1**, where it was held that the right to life under Article 2 did not guarantee the right to die, and in **Vo v France (2005) 40 EHRR 2** it was held that Article 2 did not guarantee the right to life of the unborn child.

It is worthy of note that, though the death penalty is expressly provided for in the first sentence of Article 2, although optional protocol No 6 of the European Convention

provides that the death penalty shall be abolished and that no one shall be condemned to such penalty or executed, and “protocol No 13, abolishes the death penalty in all circumstances. Both protocols have been ratified by the United Kingdom. In addition it is arguable that the death penalty is contrary to Article 3 of the Convention, prohibiting inhuman treatment” See **Ocalam v Turkey (2005) 45 EHRR 1.**

One of the rights frequently infringed by incidents of oil pollution is the right to life. Every other rights would be meaningless if the key right; the right to life is violated.

All constitutions of modern states provides/made provision for it as protection. For instance, Constitution of the Federal Republic of Nigeria 1999 is not exempted, where Section 33(1) stipulates that “every person has a right to life and no one shall be sentence of a court in respect of a criminal offence of which he has been found guilty in Nigeria”. This is most superior right.

Due to the sacredness of human life, nearly all the democratic constitutions of the world recognise the duty and importance of preserving human life.

As a result, environmental degradation poses a lot of threat to human endeavours. The worst life-threatening hazard is pollution of the different levels of environment. This usually have far reaching effects on the lives of the people generally.

According to Atsegbua *et al.*, (2007: 13), the affirmation duty of states to protect the right to life should logically apply to circumstances in which a state’s activity poses life-threatening environment risks. Threats to the environment or serious environmental hazards may have far-reaching effects on the lives of large groups of people directly or indirectly, and the connection between the right to life and the environment is an obvious one (See Ksentini, “Human Rights and the Environment”, cited in Okanmah, (1997), J.A.L. p 53)

SELF ASSESSMENT TEST

- In what ways can the hazardous environment affect the right to life of any citizen?

3.2 Property Rights

This can be found in sections 43 and 44 of the Constitution of the Federal Republic of Nigeria 1999 which stipulated as follows:

“Subject to the provision of this constitution, every citizens of Nigeria shall have the right to acquire and own immovable property anywhere in Nigeria”.

Another corollary point to the above is the “Additional Protocols to the convention, Article 1 of the First protocol – Protection of property, that; every natural or legal person is entitled to the peaceful enjoyment of his possessions. This article guarantees the right to peaceful enjoyment of possessions, which includes all property rights and states that no one shall be deprived of their possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law. This was further emphasized in **Nerval and others V United Kingdom (2005) 36 EHRR 4** where it was held that waiters’ tip came within the term ‘possessions’

However, must be noted that, the article states that the right does not in any way impair the right of a state to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties (for further analysis of the case law under Article 1 of the First Protocol, See Monbray, Cases and Materials on the European Convention on Human Rights, Butterworth’s 2007, Chapter 16 (Steve Foster 2008: 80 – 1)

The Article made a remarkable landmark by dividing it into three rules; the principle of peaceful enjoyment of property; the deprivation of possessing; and the rights of states to control the use of property in the public interest. This article can be used in conjunction with other convention rights, such as the right to private and family life (See Section 37 of the 1999 Constitutions of Nigeria as amended in 2011).

Therefore, in **Gillow v United Kingdom (1987) 13 EHRR 393**, where it was held by a learned judge that the law of Guernsey prohibiting the applicants from residing in their own house because they failed to satisfy residence criteria was a disproportionate interference with their right to private life and family life. (Here Article of the first protocol

could not be relied upon because Guernsey was not bound by that protocol). This right can be threatening by the town planning enforcement laws where a citizen fails to take into cognizance planning laws into consideration while building his house. In Lagos, some houses built near the canal have to be demolished to save people/residents of danger of flood disaster, especially the havoc of July 2011 rain caused to many Lagosians. Most of these canals are already blocked due to dumping of domestic wastes into it by the carefree people and some wicked industrialists who dumped illegal industrial waste into it.

3.3 Economic, Social and Cultural Rights

This is second most important right; it is next to absolute right to life since they affect his opportunity to engage in economic activity for the purpose of survival. The continuity of existence of right to life depends wholly in the prosperous economic activities. In accordance with to Feinberg view (1373:73), life is meaningless without the necessity to labour which nature has imposed on man in order to sustain himself.

Hitherto, Niger Delta region oil extraction activities which culminate into the pollution of their environment remain to the detriment of individual economic rights. No doubt of the fact that, the activities of individuals led to the pollution of atmosphere, accentuated land scarcity and threatened the conditions of existence of the people around the area. This condition tends to affect the social-cultural rights of the people around the polluted environment by displacing them from their natural habitats; People's and social economic base is therefore changed as a result.

4.0 Summary

At the end of this unit, right of citizens to life, property rights and economic, social and cultural rights was thoroughly examined. It is interesting to note that right to life is inviolable; likewise the next to this absolute right is right of economic, social and cultural. These rights have affected Nigerian writers and research students, one way or the other.

5.0 Conclusion

In this unit students have learnt about the three sub subject discussed above. These are very germane to individual existence. The best right is right to life and the anchor to this is the right to life, and every other right owe its existence to the continue survival of

the right to life Economic right on the other hand is the back bone of the right to life; social and cultural rights which are cohorts of right to life.

6.0 Tutor Marked Assignment (TMA)

Write full note on the following:

- (1) Property Rights
- (2) Economic, Social and Cultural Rights

7.0 References and Further Readings

- (1) Atsegbua et al (2004) supra Pp 129-134
- (2) Steve Foster (2008) Human Rights and Civil Liberation Second Ed. England, Ryerson Layman p 165-7
- (3) 1999 Federal Constitution of Nigeria Cap IV. Section 33, 36, 43 and 44

UNIT 4

RIGHT TO HEALTHY SAFETY AND WELFARE

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Sources of Law relating to health and safety of job environment
 - 3.2 Nigerian 1999 Constitutional provisions (as amended in 2011)
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

Health, Safety and Welfare law are very vital to maintaining healthy living. The issue of safety, welfare and health right derives its important and severity through the activities of the human race.

However, the health factor of environmental pollutions – air, noise, water and waste are major contributions to lung and bladder cancers. Statistics show that lung cancer rate is higher generally in cities where increased high industries and automobile traffic produce high amounts of carbon monoxide. It is now law in Australia, that the emission of carbon monoxide of any magnitude attract fine in form of tax. This is par of safety law to prevent pollution through this means.

2.0 Objectives

The main objective of this unit is to let the students and interested readers know the relevance of Right to health, safety and welfare to all workers, not only in Nigeria but all over the world.

Secondly, to expose the students to the statutory regulations that back up the health, welfare and safety.

3.0 Main Content

3.1 Source of Law related to Health and Safety

It is a fact to note that, the activity of man in his environment causes pollution that are injurious to human health. For instance, some people use carcinogenic chemical which include benzene, asbestos, arsenic and vinyl chloride. The most significant health problem caused by noise pollution is deafness. It is crystal clear that any noise which appears to be louder than talking can damage the delicate hair cells in the cochlea.

As a result, health, welfare and safety law has been formulated to combat the menace of various hazards. The three key principal elements applicable to English law are legislation or statutory law. Common Law and Contract Law. Nigeria is a strong member of Commonwealth of Nations therefore as these law applicable to all, who were formerly under British colonialist, Nigeria is not exempted.

3.1.1 Statute Law

This consists of Acts of Parliaments such as Health and Safety at work e.t.c. Act 1974 (HSWA), which an enabling Act, together with a large number of statutory instruments (Sis) made under the Acts of Parliaments.

Statutory instruments are known as ‘subordinate legislation’ or ‘delegated legislation’. It is relating to the Health and Safety which consists of statutory instruments proposed by Health and Safety Commission (HSC), after due consultation with industry, local authorities and other relevant groups, to the Secretary of State for Employment and, thereafter to be laid before Parliament Statutory Instruments take the form of regulations, that is, the Management of Health and Safety at Work Regulations 1992 (MHSWR), the Control of Substances, Hazardous to Health Regulations 1994 (COSHH), and Electricity at Work Regulations 1989. Till date, since 1974, in England when the HSWA was introduced, all regulations concerning workplace health, safety and welfare have been passed in furtherance of HSWA.

3.1.2 Common Law: Common law is an area of law that has developed since the eleventh century and is based on the decisions of the courts whereby precedents are established. Common law is the body of case law that is universally, or commonly applied or generally acceptable as a result of judgments of the courts. Each decisions of the court contain the

judge's enunciation of the facts, a statement of the law applicable to the cause and their ratio decided, or legal reasoning, for the findings that have arrived at.

Most of these final decisions of court of record are recorded in the various law reports. All these judgments have developed over time into the body of decided case law. In this wise, common law can equally be regarded as accumulated case law, recorded in the Law Reports, underpinned by the principle of precedent. The judicial precedent is a must apply concept by the courts. Courts are duty bound to follow previous decision of superior courts but decisions of court of its own level or jurisdiction can be applied on principle of persuasions.

3.1.3 Judicial Precedents: The doctrine can be defined as 'a decision of a tribunal to which some authority is attached'. The doctrines have tremendously influenced the development of law but are in themselves, one of the major material sources of the law.

One can say that, a case is a binding decision of precedent, that is, the principle on which the decision was made will be binding in subsequent casers which are founded on similar facts. Therefore, a precedent may be authoritative or persuasive.

3.1.3.1 Authoritative Precedents are earlier decision which courts/judges must follow. The lower courts have no choice in the matter, rather they are bound by a previous decisions of a higher court. This is a practise which judges must adhere to strictly

3.1.3.2 Persuasive Precedents: The decisions that falls under this category are not binding on a courts/judges, through a court may attach some importance; for example the superior courts in commonwealth countries will be treated with respect in the English High Court. To this extent, judge is not expressly bond or under a duty to apply a persuasive precedents.

SELF ASSESSMENT TEST

- Examine the sources of Health and Safety Law in your country.

3.2 Nigerian 1999 Constitutional provisions (as amended in 2011)

Nigerian Constitution contains provisions relating to the right to Health, Safety and Welfare Nigerian government at all levels (the three tiers) are not unconcerned about the health and safety of the environment for all her citizens. Chapter II, Fundamental Objectives and Directive Principles of State Policy, particularly Section 17 (3) (s) of the 1999 Constitution of Federal Republic of Nigeria (as amended in 2011) which states that:

The state shall direct its policy towards ensuring that:

(c) The healthy, safety and welfare of all persons in employments are safeguarded and not endangered or abused.

(d) There are adequate medical and health facilities for all persons.

This section and its subsections (c) and (d) captured the entire discussion in this unit, as par constitutional safeguards to the right to health.

However, the regional and inter-regional organizations are not left out in providing international and regional instruments for the right to health to which Nigeria is a stakeholders/signatory to the conventions, including the African Charter, with reference to Articles 6 which essentially implies a feasible protection of the citizens from natural hazards and from pollution.

Furthermore, it is trite that the emission of toxic pollutants into the atmosphere which endanger all living organisms will be injurious to health. There is no need emphasizing that the Nigeria Constitution does not expressly provide for an enforceable right to health and safety; as far as there is provision for right to life that will affected if a person's or organism's health is put in jeopardy by activities unauthorized by the state. World Health Organization posited in a recent report that "Human health is essential for sustainable development since without health, human beings would not be able to engage in development, combat poverty and care for their environment". (See WHO, paper prepared for the commission on sustainable development; March 1994).

In other word, the main theme of protecting the environment is to ensure the health of the people (See Principle I of Rio Declaration Environments and Development)

Be that as it may, it is necessary to remind ourselves that the occupation of the oil producing companies in Nigeria is on how profits can be maximized rather than sustaining

and protecting the environment for health, safety and welfare of lives and property of the inhabitants around Niger Delta region.

It is unfortunate that the people around the region are not even after the welfare of the people. But the major problem of the people is how to share from the oil wealth. In addition, most of the companies around the region do not have pollution control instrument to get rid of the pollution within time limit.

4.0 Conclusion

From above discussion, relating to sources of law, health and safety of job environment; and the Nigerian 1999 Constitutions provision (as amended in 2011) shows that Government worldwide has interest in their environment. The international and regional instruments were made to address the menace of health hindrances in our environment.

5.0 Summary

Our environment particularly, the work environment needs to be properly protected against any unhealthy elements in the various company surroundings. To remain healthy, we have to remain clean always. The companies have been enjoined to make their job environment health safe for their employees/workers, and visitors to their company environment.

6.0 Tutor Marked Assignments (T.M.A)

- (1) Evaluate Section 7(3) particularly sub-section (a) and (c) of the 1999, Federal Constitution of Nigeria (as amended)
- (2) Identify the role of the companies in Health and Safety Law compliance in your country.

7.0 References and Further Readings.

- (1) 1999 Nigerian Constitution (as amended 2011)
- (2) Atsegbua et al
- (3) Pearse D. F Brethering (1978) The Impact of Environment Lagos, University of Lagos p.7

- (4) Ajomo M. A. (1994) An Examination of Environmental Law, in Environmental and Sustainable Development in Nigeria; edn. Lagos, NIALS/British Council (1994)
- (5) Jeremy Stranks (1998). Health and Safety Law. Third edition, London (GB) Biddies Ltd.

UNIT 5

HUMAN RIGHTS AND ENVIRONMENTAL RIGHTS I

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Human Rights and Environmental Right
 - 3.2 Contribution of African Charter
 - 3.3 Environment Right in other Jurisdictions
 - 3.4 Environmental Rights and Development Needs
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 Reference and Further Readings

1.0 Introduction

Various definitions have been provided for Human rights by many environmentalists, environmental lawyers, Human rights activists, Constitutionlists and other scholars; though no unifying definition has been agreed upon. In this unit we are not going into this area of divergence views, but to define Human Right within the general scope of Environmental Right/Environmental law. Therefore, environment is defined as the totality of our surroundings, especially material and spirituality influences which affect the growth, development and existence of a living being (that is human sustainability depend largely on his environment). Human Rights, on other hand means the liberties/freedoms, benefits and immunities in accordance with modern values. Viewed from these definitions, it is trite to state that Environmental Right plus Human Rights connote that human beings have unperturbed rights to claim as a matter of natural right in the society/environment which they find themselves. In the modern day, most of the nations of the world, have enshrined this doctrine of 'Rights' in their various constitutions; the regional, continental and international organizations are not left out by emphasizing protection and sustainability of

environment and its rights for human development either as ‘Bills of Rights’ or as ‘Fundamental Human Rights’.

2.0 Objectives

The objectives of this unit are

- (i) To expose students to their right within the environment they live
- (ii) To let them know the impact of constitutions of nations; regions, continental and international organizations in sustaining environmental needs

3.0 Main Contents

3.1 Human Rights and Environmental Rights

Human rights are natural gifts and their existence surpassed creation of environment. Living organisms /creatures were created into the environment to enjoy to the fullest the endowment of the surroundings where they find themselves without hindrances to their rights of uses. This notion was corroborated by Atsegbua *et al* that, ‘Pre-colonial Nigeria was politically and culturally heterogeneous in its set up, yet, nations of human rights still exist, predicted essentially the communalistic ethos of the era. Consequently, human rights were collectivized.

Colonialism is largely abridged rather than enhanced human rights. ‘One of the glaring indexes of the colonial period was the denial of the fundamental rights of the colonized peoples. It is in this context that the agreement of civilizing mission can be floored. While the colonizers propounded notions of human rights or natural rights, they paradoxically never saw the necessity for the enjoyment of these rights by the colonized peoples. Of course the logic was that colonialism was incapable of allowing the full effect of the rights; otherwise colonialism would have ceased to be relevant. Additionally the derogation from the rights had also affected the development and articulation of an African human rights dispensation and perspectives (Dr. Onje-Gye-Wado as cited in Dakas), “The Implementation of the African Charter on Human and Peoples Rights in Nigeria”: 1986 – 1990 p.43

Dr. Onje-Gye-Wado was right to accused the colonialists as pretenders and wicked, they know the essence and of rights but deliberately deprived the colonized people of those rights which were freely enjoyed in their home countries. To buttress this fact, Nigeria was

under the colonial siege for 100 years (1861 – 1960). It is no more a good news to know that no African (Nigerian) enjoys ‘a pinch of salt-like’ freedom throughout their 100 years of retrogressive colonial administration. It was at the twilights of the imperialists era in Nigeria that the fundamental human rights, they had denied Nigerians for so long years, a century was technically slotted into the Willink’s Minorities Commission set up in 1958; purportedly to look into Minorities agitations viz fear of domination by the majority tribes in the country. It was this commission that smuggled into its report ‘Fundamental Rights clauses’ and were embodied into the Independence Constitution of the Federal Republic of Nigeria particularly Chapter III of both 1960 and 1963 Republican Constitution. It was Chapter IV of Second Republic Constitution of 1979, 1989 and the present 1999, Forth Republic Federal Constitution (and its amendment in 2011) of Nigeria. Although there were no clear changes from pre-1999 (post independence) till the present day Nigeria. It has been and still remains Military Administration transformation. No spectacular amendment has taken place all the while. It is worth to acknowledge the 1999 Constitution which provides in Section 20 that: “states shall protect and improve the environment and safeguard the water, air, land, forest and wildlife of Nigeria.”

This clause is unfortunately not justifiable as it is not part of Cap IV of the Constitution. It would have been accorded enforcement but it is now, regrettable, a mere integral part of the fundamental objective principles of Nigeria state policy with a known fact that it is not justifiable.

Furthermore, it is disheartening that most provisions of Nigeria laws, regulations and rules on pollutions control are not elaborate enough or made in such a way to cope with complex, and sophisticated subject matters which are main bane of environmental sustainability and development. Nigeria is still up till today relying on common law remedies to deal with the civil liability in tort. It is crystal clear that, this remedies are not capable of dealing with the rate of technology advancement particular in the oil industry. (Atsegbua I 1992: 57).

The rule in ***Rylands v Fletcher*** (1866 L.R.Ex. 265 which has been the main reference for the tort of negligence and nuisance is outdated, and cannot meet the claim of the victims of oil spillage which currently taking place in the Delta Region. In the similar veins, the

criminal liabilities under the Oil in Navigable Water Act also fall short of adequacy and reliability in the present state of technology sophistication in Nigeria today.

At this junctions, these issues raised in this paper need to be urgently addressed by the law makers in Nigeria, particularly all tiers of government, because the Environmental matter falls within the purview of concurrent list of the constitution. States therefore have a constitutional right to make laws in this regards to address the environmental rights lapses.

SELF ASSESSMENT TEST

“Environmental Rights and human rights are synonymous” Discuss.

3.2 Contribution of African Charter

Africa and Africans are not too conscious of what to do exactly to improve and better the lots of their environment not until 1980s and early 1990s.

The African Charter on Human and Peoples Rights came into being on the 19th January 1981 through the then Organization of African Unity (OAU) and now African Union. Majority of African countries reduce economic and social rights to the level of “fundamental objective of state” separate from oil civil and political rights which are regarded as core rights. Nigeria is a key signatory to the African Charter of 1980s which because part of Nigerian law.

The Charter on Human and Peoples Rights (Application and Enforcement) Act Cap 10, 1983 makes provisions for the three generations of human rights by making provisions for certain political and civil rights, collective social and economic rights, and the right to development which include rights to a general satisfaction acceptable/conducive environment. In Article 24, the African Charter provides that “All people shall have the rights to a general satisfactory environment favourable to their development”.

Nigeria’s adoption of the African Charter into her arrays of laws makes the charter part of Nigeria legal system with full force of law and enforcement. Section 1 of the Act makes the Charter enforceable in Nigerian courts. Hence, the rights embodied in the charter are legal rights; the alleged breach of which any High Courts has jurisdiction to entertain under Section 255 of the Constitution of Nigeria.

See *General Abacha v Gani Fawehinmi* (2000) 77, LRCN 12554 – 1401 where the appellant/respondents filed an application at the Federal High Court, Lagos to challenge his

arrest and detention for four days. The action was brought under the fundamental right (Enforcement Procedure) Rules 1979. Part of the relief sought include two declarations, one of which is that his arrest and detention constitute a violation of his fundamental rights guaranteed under the 1979 Constitution and the African Charter on Human and Peoples' Rights (Ratification and Enforcement) Act, Cap 10, Laws of the Federation of Nigeria, 1990 (as amended in 2004). On appeal to the Supreme Court the court allowed the cross-appeal in favour of the respondents and upheld the letter and spirit of the African Charter.

The Supreme Court stated:

That an international treaty become, binding when enacted into law by the National Assembly in that Section 12(1) 1979 Constitution provides "No treaty between the Federation and any other country shall have the force of law except to the extent to which such treaty has been enacted into law by the National Assembly".

This shows the effectiveness of the application of the Human Rights as enshrined in the African Charter in the domestic/Municipal Superior Courts in Nigeria. See also *Gbemke v. Shell Petroleum Development Company*, Unreported Suit No. FHC/B/CS/53/05.

4.0 Conclusion

This unit discusses the environmental rights and human right; impact of African Charter. The right of Nigeria municipal court in handling matters in relation to the charter as a result of adoption of the charter into her constitution is also discussed.

5.0 Summary

From the above explanation, it is clear that Environmental Right and Human Right are inevitable concomitant in our society. The African Charter in no small measure contributed to the enforcement of human rights in the continent.

6.0 Tutor Marked Assignment

- (1) Justify the inclusion of African Charter of 1981 in the subsequent Federal Constitutions of Nigeria

(2) Critically analyse the concept of Environmental Rights as stated in Chapter 2, Section 20(3), under the state policy objective

7.0 References and Further Readings

- 1) 1999 Constitution supra
- 2) Atsegbua I. “Oil Pollution and the protection of the Environment in Nigeria” (1992) Justice Volume 2 page 57, No 43 of 1968
- 3) Amokaye, G. O. (2004) Environmental Law and Practice in Nigeria, Akoka Lagos, University of Lagos Press. P 3 – 5.
- 4) Atsegbua *et. al.*,13 – 41

UNIT 6

HUMAN RIGHTS AND ENVIRONMENTAL LAW II

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Environmental Right in Other Jurisdiction
 - 3.2 Environmental Rights and Developmental Needs
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

In the previous unit which served as first part of this unit, we learnt about Human Rights and Environmental right and the contribution of the African Charter on Human and People's Rights. This unit introduces us into Environmental Right in the other countries, referred to here as Other Jurisdictions and the second stanza is Environmental Right and Developmental Needs. The way and manner these rights in relations to environmental rights are protected in other jurisdictions are center point of this unit.

2.0 Objectives

At this end of this unit, we would be able to;

- Know the issues concerning environmental right in other jurisdiction apart from Nigeria
- Know sustainable development and environmental rights; and preservation of natural resources for the benefit of humanity.

3.0 Main Content

3.1 Environmental Right in Other Jurisdictions

The issue of environmental right is a worldwide concept. It has moved from domestic level to international level. It is not only an African affair, but a universal problem which need contribution of everybody to protect and savage.

In India, the magnitude of the problem of water pollution and the growing concern for remedial action, has led to legislative intervention. As a result, the environment (protection) Act of 1986 thereafter referred to as Environment Act was a giant stride in this direction. The Act defined environment which includes water and the relationship that exists among and between water and human beings, other creatures, plants, microorganism and property (See S2(9) of the Environment (Protection) Act 1986). The Act empowered the Central Government of India to establish standards for the quality lays down the standards for discharge of environmental pollutants from various sources. Dharmendra S. Sengor 92997:43.

In the Federation of Canada, the Province of Ontario has enacted an Environmental Bill of Rights which particularly provides for the right to a clean and healthful environment (See K. Webbs “Taking matters into their own Hands” (1991) 36 Mc Gill L. J. 771 as cited by Patrick D. Okonmah supra).

United States of America is not left out in the enactment of laws that protects her citizens from hazardous environment. In USA, there is statutory rule specially created for strict liability for oil pollution under the Federal Water Pollution Control Act 1972 (as amended in 1977) and under the comprehensive responses compensation and liability Act, 1989, also the Oil Pollution Act 1990, all of which make liability strict whether or not the defendant was negligent.

The UNO is equally part of the task to rid of the environmental pollution and degradation. The right to a clean environment as enshrined in the United Nation Commission on Human Rights has been judicially recognised/applied in India. It was applied in the *Pakistan case Shela Zia v Water and Power Development Authority PLD* 1994 Sc.A 16. In this case, a

group of citizens sued and obtained a Supreme Court judgement stating that, “The right to life included a right to live in a clean environment.”

Based on this decision of Indian/Pakistan court, everybody, individuals and communities in Nigeria should exercise the right to a clean and healthy surrounding under the Chapter IV, sections 33 to 46, titled Fundamental Rights of the Nigeria Federal Constitution (Atsegbua supra, p. 143). In a similar vein, Alfred O. Okukpon relying on section 20 emphasized that “our reasoning is anchored on the fact that a right to life implies a right to live in an environment devoid of any injurious degradation” and nothing injurious to human life.

In Spain, the Spanish Constitution of December 29, 1978 specifically provided that, “everyone has the right to enjoy an environment sustainable for the development of the person as well as the duty to preserve it” (See the Constitution of Spain, December 29 1978, Article 45, paragraph 1 and 2).

In Peru, the Peruvian Constitution of 1979 similarly stated therein that:

“the right to everyone to live in a healthy environment, ecologically balanced and adequate for the development of life and preservation of the countryside and nature” (See also Peru Constitution of July, 1978 Article 23).

In Uganda, the Uganda Constitution in its chapter on protecting and promotion of fundamental right include a right to environment. Specifically, Article 39 of the Constitution provides that “every Ugandan has a right to clean and healthy environment”.

South African Constitution contained similar provision which stipulates that “every person shall have the right to the environment which is not detriment to his health or well being”.

SELF ASSESSMENT TEST:

Highlight the contribution of other nations to the provisions of clean environment as a human right.

3.1.1 Effectiveness of the Constitutional Provisions and Measures

In the case of Yaomani, an Indian for instance, was able to rely on the fundamental human right to life as stated in the South American Constitution, where the Inter-American Commission on Human Rights found that environmental degradation violates the right to life. However, the Latin American countries indicted the Brazilian government of flagrantly violating the human right of its citizens. This was as a result of inability of the government to take or adopt timely and effective measure to curb environmental hazard leading to the loss, injuring of many cultural identity and property (See Case No 7615, Inter-America CHR 24, 28, 33 OEA/L/V/II, 66, doc. 10 rev, 1 (1985) cited in Okonmah, supra p. 16 . (Atsegbua, 2007: 143 – 4)

UN Human Right Committee equally supported victims of environmental pollution where it observe that “a nuclear disposal site in Port Hope, Canada affected the lives of nearby inhabitants and raised very vital issues in relation to obligation of states to a nuclear site in Port Hope, located in Canada. This incident generated a serious debate on the obligation of states to protect the major rights to man.

Moreover, the African Commission on Human Rights which is Africa’s equivalent of the European Court of Human Rights Courts, does not give binding decision, its jurisdiction and competence is limited to promotional activities and making recommendations to the Assembly of Heads of States. The membership of this group comprises of the worst violators of human rights in Africa.

4.0 Conclusion

In this unit, environmental Rights in other jurisdiction were discussed apart from Africa; and environmental rights as it’s relate to developmental needs.

5.0 Summary

The role of Africa Charter on Human and People Rights in preserving Environmental Rights though African countries started lately but the degree of attention they are now directing towards environmental rights is remarkable. The other countries in far Europe, America, Canada, Indian and Asian were equally emphasised their impact in building and sustaining environmental right of their people.

6.0 Tutor Marked Assignment

- (1) Enumerate the role of the African Charter on Human and Peoples Rights towards ensuring environmental rights and development needs of Africans.
- (2) The issue of environmental rights is a universal phenomenon. Discuss this universal phenomena with sub-topic 3.2

7.0 References and Further Readings

- i. 1999 Constitution of Nigeria [supra]
- ii. Dharmendra Senghor [supra]

MODULE 3
CONCEPT OF ENVIRONMENTAL LAW AND LEGAL CONTROL
MECHANISM OF POLLUTION

Unit 1: Case Studies in Environmental Pollution Law in some Selected Areas and Their Implications

Unit 2: Oil Pollution and Other Chemical

Unit 3: Industrial Waste Management and Control I

Unit 4: Industrial Waste Management and Control II

Unit 5: (i) Water Pollution Control Laws

(ii) Water Qualities Management

Unit 6: The Economic Approach to Pollution Control

UNIT 1

CASE STUDIES IN ENVIRONMENTAL POLLUTION IN SOME SELECTED AREAS AND THEIR IMPLICATIONS

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

1.0 Introduction

Pollution of water by oils is worth an important discussion, since our modern society raises the energy from fossils fuel, In fact, oil pollution is likely to be an increasing threat to marine ecosystem as exploration for new off shore wells are stepped up.

Oil spilled into water environment is an ugly form of pollution. It kill aquatic plants and animals in different ways; it may be folic, some petroleum constituents, such as phenol, are water soluble, so that they spread rapidly through the ambient environment; oil spillage can affect organisms respiration, causing suffocation.

Pollution is “causing environmental damage on a global scale and widespread pollution disrupt the ecosystem”. If present trends continue, “the natural environment will be increasingly stressed” – (“Global Environmental Outlook, 2000” United Nations Environment Programme). It is no gainsaying that pollutants generally have detractive impact or harm on all living things (especially carbon-dioxide). The position of C. S. Ola on “Industrial and Oil pollution” (1984) captured this development where he defined ‘environment’ to includes the introduction of new materials into the environment by technology. Generally, the presence of matter or energy whose nature, location or quality

produces undesired environmental effects. Under the Clean Water Act (see US Federal Water Pollution Control Act Amendment 1972 of the relatively of the definition of pollution) defined the term as the manmade, or man-induced alteration of the physical, biological and radiological integrity of water.

According to World Health Organisation (W.H.O 1974); the environmental is considered polluted when it is altered in composition or condition directly or indirectly as a result of the introduction of pollutants. “Water pollution is thus the down grading of water quality to the point where it affects unreasonably water use for domestic, industrial, agricultural or other uses. Pollution exists only when the impurity concentration is high enough to harm water usage adversely and unreasonably, water pollution is reduced by dillution and self-purification in rivers and lakes. But when their effectiveness in this respect is exceeded problem develops cumulatively.

In this Module and its Units, Oil and other chemical pollution shall be discussed.

2.0 Objectives:

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

- Meaning of oil pollution/spillage
- Other chemical pollutants
- Impact of oil and other chemical pollution

3.0 Main Topics

3.1 Oil Pollution

The most damaging type of pollution to the environment is caused by oil. The effects of the damage and the attitudes of the oil companies involved are not encouraging. It is generally agreed that environment pollution, caused mainly by oil spillages and indiscriminate disposal of oil industry waste and cuttings are common place in the various oil region.

There is no doubt that crude oil is the major mineral resources in Nigeria which generate a lot of money amounting to 80% of total revenue accruing to the federal government. The crude oil is obtained from deep down the soil and it varies widely in composition, colour, factors which are based on the area from which it is obtained. Natural gas occurs on the layer above the oil in the soil, so that to get the oil, they have to first get

the gas. The gas is burnt continuously day and night. Both federal government of Nigeria and the oil companies have made plans to stop gas flaring. The plan is already on the way to collect the gas for wealth generation. Nigeria is known as Second Largest producer of gas in the world than crude oil production. This fact was posited by an expert.

The World Bank estimates that oil companies in Rivers and Delta States spill over 2,300m³ of oil in 300 major accidents yearly. On its part, Shell says it spilled an average of 7,350 barrels of oil a year between 1989 and 1996 and that a total of 221 spills occurred in the course of its operation. It is not unlikely that the figures above are grossly underestimated. Grevy (1995) notes that oil companies tend to under-estimate the incidents of oil spillage and the total spillage might be ten times as high.

Prospecting for crude oil usually result in crops and forest destruction. When laying the pipe lines in collecting the crude oil, there are times accident happens, and a lot of crude oil leaks from joint in the pipe lines. It equally occurs through the handy work of the oil pipe line saboteur who vandalizes the pipe lines in order to siphon the crude oil. When this occurs, it is called oil spillage.

The pipe lines are laid on land or in water. The areas covered by the oil spillage depend on the extent of the leakage and this normally causes enormous damage to the crops and land fertility. Although, Nigeria oil is said to contain low level of sulphur. Sulphur (iv) oxide is very harmful to plants and animals. Any area that oil spillages touches, nothing grows on the land and animals living within such an area will die off. The same thing applicable to water, all the living organism in the water dies. It damages the aquatic life. On the other hand, gas is burnt both in the day and night, its flames are usually seen very bright but it has very sad adverse effect which is that, it reduces the yield of agricultural products.

The gas flame can also harm human health. The temperatures in these areas are also generally higher than usual. The people living in the area of the oil spill are uncomfortable. Oil spillage contaminates rivers and seas and makes water in rivers, oceans and seas unfit for human uses – drinking, cooking, damming, fishing and even difficult to navigate.

For well over four decades, the oil majors have been prospecting for oil in the Niger Delta region, they have not only radically disrupted the ecological balance of the area, but have also, through negligence and cyclical indifference, orchestrated a various ecological

war. There has been no effective effort on the part of Government and the oil operating companies to control the environmental problem associated with the oil industry (Green Peace International, 1994; Greenpeace Netherland, 1996)

Drilling for oil is also a potential source of environmental pollution. Oil drilling operations are in four stages: Preparing site, exploring drilling, production testing and transportation. These stages impact on the environment, through channels are dredged using barges. Dredging is particularly harmful to the environment as dredged materials dumped on either sides of the canal turn acidic and overtime contaminates the ground (Van Dessel, 1995).

We need to emphasize here the point that the contamination of ground water is a very serious environmental problem in the Niger Delta. Ibiebele (1986) reported high concentration of dissolved petroleum hydrocarbon in waste water from refineries and oil exporting terminals in the Niger Delta. In 1993, a Shell environmental impact study also found an average hydrocarbon on content of about 62.7mg/l in the Olama Creek, near the Bonny Terminal (Orubu 2002, Ndkwere and Ezehe 1990)

In a similar vein, underground project led a team of local and international observers to Luawi, one of the villages in Ogoni land in 1997. The team analysed samples taken from streams and as a result discovered that the total petroleum hydrocarbon tested at 18 parts per millions (ppm) which was 360 times higher than levels deemed acceptable in European countries (Human Rights Watch 1999)

The most alarming is the changing of the mangrove and rainforest vegetation with its attendant loss of numerous trees and plants with potential economic and pharmaceutical values. The mangrove of the Niger Delta is said to be the third largest in the world and the largest in the continent of Africa. Not less than 60 percent or 60,000sq² kilometers is found in the Niger Delta. The Niger Delta has high biodiversity characteristics of extensive swamp and forest areas and animals (World Bank 1995; Jones 1998). The inevitable loss of biodiversity has been well documented and recommended cautionary measures should not be delayed (NNPC/AAPW 2004).

To some extent, the beginning of discovery of oil, oil industry and its subsequent boom in Nigeria up to 1986 could be regarded as the era of innocence and ignorance of law

can be seen as excuse. The level of the deleterious impact of oil business was low. But the discernible impact of oil is the rapid transformation of Nigeria into an industrialised country, in relative terms.

The products of industries are found everywhere and ecological systems are being destroyed. Oil is produced on shore and mainstream particularly Niger Delta Basin and offshore and so vegetation and farmland are destroyed (C. S. Ola)

However, from the 1990s, this gave room for proper articulation of several issues bothering on the oil industry (Odoegwu, 1981). Foremost, in this respect was environmental justice and equity. This course was given ideological underpinning by Ken Sarowiwa and his group. Over time, the oil majors came to realize that it could no longer be business as usual.

Thus, there was a resemblance of a prodded response to the environmental challenges in the oil-bearing enclave of the Niger-Delta.

3.1.2 Oil Spills in the Delta Region

As analysed above, there have been a new high number of incidents and volumes of oil spills in the Niger delta region. Based on official statistics, Fekumah found that from May 1980 – May 1990, approximately 433,076 barrels of crude oil were released and wasted into the Nigerian environment from the Eastern operations alone. Oil operations are divided into two in Nigeria eastern and western operations.

In addition to the spills that were directly reported, research shows the comprehension study by factoring in the number and volume that is unreported and therefore not included in the official data collected. The analysis further shows that based on oil industry sources, more than 1.07 million barrels, and equivalent of US 45 million gallons of oil were spilled in Nigeria from 1960 to 1997. The largest spill was an offshore well blowout in January 190, where not less 200,000 barrels of oil, about US 8.4 million gallons was spilled and wasted into the Atlantic Ocean from a Texaco facility alone and destroyed 500 hectares of mangroves. This is according to oil industry sources. The Department of Research which is the regulatory agency for the oil industry in Nigeria estimates that more than 400,000 barrels about US 16.8 million gallons were spill in this incident.

However, various studies of oil spillages account between 1989 and 2001 confirm similar high figures as earlier studies emphasized above. In fact, of a total of about 526,679 barrels of oil was spilled between 1989 and 1999, over 95% was lost to the environment.

This figure was confirmed by the Punch Newspaper Energy Correspondent in the Thursday, July 29, 2010 publication that “a total of 3,203 oil spills have been recorded in the Niger Delta region in the last four years”. This is contained in the latest report on oil spills in Nigeria, prepared by the National Oil Spill Detection and Response Agency (NOSDRA). Out of this figure, 859 of the 2,203 oil spills sites have been remediated and verified by NOSDRA. The NOSDRA document entitled “Oil Spill Reports” stated that, “for the period of January 2006 – June 2010, the Federal Government has received 3,203 oil spill report from oil companies with accompanying 9,256 barrels of oils spilled into the environment.

In this case, however, the number of sites remediated by oil companies and certificates issued by NOSDRA include Nigeria Agip Oil Company (NAOC) 53; Shell Petroleum Development Limited, 75; Total Exploration and Production, 34; and Chevron Nigeria Limited, 14. As part of their remediation plan for the year 2010, SPDC and NAOC have respectively identified 268 and 1555 number of past impacted sites for remediation.

The issue of oil spillages was emphasised by the former Minister of Environment, Mr. John Odey, while meeting with Chief Executives of Oil companies in Abuja on Tuesday, July 27, 2010, said that “oil spill had caused severe environmental degradation and dislocation of social livelihood of oil communities”. He further said, “in view of the recent US oil spill and government’s response to the explosion of the deep horizon oil rig, as well as the June 16, 2010 spill in Xingang Port in the Dalian Province of China, questions have arisen over the vulnerability of your (oil firms) operations and our environment to similar situation”.

In a similar remark, The Guardian newspapers Energy Correspondent of Wednesday July 28, 2010 reported that oil firms face tougher challenges in tackling oil spillage in Niger delta. It was stated that International Oil Companies (IOC’s) in Nigeria to end oil spillages and totally clean up the affected sites may take larger time than anticipated.

The NOSDRA, DG, Mrs. Uche Okwechime attributed the perpetual oil spillage to “third party interference” and that they contributed substantially to menace of oil spills in the Niger delta. Therefore, oil thieves in the oil region of the country have intensified efforts in making a living through this means of vandalizing the oil pipelines. No wonder, Niger Delta has been declared one of the most oil-polluted places on the planet with more than 6,800 recorded oil spills, accounting for a loss of nine million to thirteen million barrels.

Although, the communities around the oil region had always held the IOC’s responsible for the pollution of their environment, with no concrete measures of addressing the menace. In defence of this allegation, the Manager Environmental and Regulatory organ of Exxon Mobil oil company, Mrs. Carol Attah said that “it was unthinkable for the oil multinational to deliberately cause spillage in their operating environment. Every single spill is a loss to our company.”

The NOSDRA boss, Mrs. Uche Okwechime said that her agency was working tirelessly in collaboration with both the affected communities and oil companies to ensure complete remediate and equally appropriate machinery has been put in place by her agency to reviewing various organs from oil regions of Delta communities with a view to ensuring that appropriate remediation and compensation were adequately carried out.

3.2 Gas Flaring

Associated and non associated natural gas are part of the process of production and development of oil since inception of oil production in 1957. There has been continuous flaring of gas in Nigeria which was estimated about 704,461.6 million cubic metres (m³) of associated gas was produced between 1961 and 1998 of which 577,830.1 m³ representing an average of 82.2 percent of total production was flared. “For instance, after a spill in Bayelsa state by the Shell Oil Company, (in 2004), (the local contractor was called for an independent investigation as he alleges that the claim of sabotage is unproven and the volume of spill declared by shell is far less than it actually is”. Shell report oil spill in Bayelsa as reported by Onwuka Nzeshi in This Day Newspaper, February 18, 2004.

In addition, most of Nigerian’s oil facilities were built in the 1960’s and 1970’s. During this period, gas was not a particular energy source as it was more difficult to produce and transport than crude oil, on which many of the world’s economics were based.

There were few markets for gas in Nigeria and at the same time there was little environmental awareness of the consequences of gas flaring. It was said by an expert that Nigeria is known for gas wasting/burning than production of crude oil.

Hitherto, little was done to find or develop gas reserves and no facilities built to collect the associated gas, which was and remains one of the most difficult and expensive gas sources to harness. It is produced at low pressure and has to be compressed and treated in purpose built facilities before it can be used. In addition, individual fields do not produce enough associated gas to be economic on their own so an expensive network of compression facilities and pipelines is needed to link these scattered fields to collect enough gas for a typical industry.

Today's commercial demand for gas in Nigeria is just 330 million scf/d, many times smaller than the large volumes of associated gas being flared. However, the best opinions' to conserve or harness this flared gas have been reinjection into oil reservoirs underground, or export. SPDC was the first company to re-inject gas as far back as 1978 at Ogunta; unfortunately most reservoirs are unsuitable for large-scale injection.

In addition, the country's first plans for a Liquefied Natural Gas [LNG] plant date back more than 30 years and several schemes failed for various reasons until 1995 when the partners of the Nigeria LNG Project decided to go ahead.

Although, a large number of these flares are close to local communities and farmlands, with an average of about 75 – 90% of produced gas being of flares. It is not surprising that Nigeria is alleged of flaring more gas than any other oil producing country, with highest next country, Libya flaring just 21% (Okoh 2001). The sum total of the volumes of gas flared would be sufficient to meet the entire gas needs of the whole of the West Africa. In other words, it is expected that there will be greater utilization of gas owing to the various gas projects being developed in the country, there is no evidence as yet that this has impacted the volume of gas currently being flared.

4.0 Conclusion

Oil pollution as discussed in this Unit covers a substantial ground in the study of Environmental Law in Nigeria, although, it can not be concluded in this unit. The way some real issues were handled shall be discussed in the next unit.

5.0 Summary

Students are no doubt benefits a lot from this unit that have introduced the oil pollution and gas flaring to them.

6.0 Tutor Marked Assignment (TMA)

- (1) Trace the origin of gas flaring in Nigeria
- (2) “Oil pollution is a major pollutant of water around Niger Delta area of Nigeria”, Discuss.

7.0 References and Further Reading

- i. Okoh R. N. (2001) Cost Benefit Analysis of Gas Production in Nigeria, Ibadan Nigeria p. 189 – 4121
- ii. SPDC (1996). Harassing gas: Community Issues, Lagos

UNIT 2

OTHER CHEMICAL POLLUTANTS

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main contents
 - 3.1 Other chemical pollutants and its effects
 - 3.2 The effect of oil spillage and burning natural; gas
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (TMA)
- 7.0 Reference/Further Readings

1.0 Introduction

Apart from the direct oil spills that causes a large percentage of oil pollution in Niger Delta region, there are other chemical sourced pollution of water which make water unsafe to the people who live around such areas, among these other chemical pollutants are, nutrient pollution, pesticides, petroleum chemicals, mercury, PCB, Toxins and other POPS, acid mine drainage, maintain top renewal mining, thermal pollution, marine debris; all these shall be discussed fully in this unit.

2.0 Objectives

At the end of this unit, the students should be able to know all the types of chemical pollutants and secondly the effects of pollution and the effect of burning natural; gas.

3.0 Main Content

3.1 Other chemical pollutants and its effects

3.1 (a) Nutrient Pollution: The Woods Hole Oceanic Graphic Institution calls nutrient pollution the most widespread, chronic environmental problem in the coastal ocean. The emissions of nitrogen, phosphorus and other nutrients came from agriculture, waste disposal, coastal development and fossil fuel use. The moment nutrient pollution reaches the

coastal zone, it stimulates harmful overgrowth of algae, which can in turn have direct toxic effects and ultimately result in low oxygen conditions.

However, the research has revealed that certain types of algae are toxic. As such, overgrowths of these ALGAE result in “harmful algal blooms” which are more colloquially referred to as “red tides” or “brown tides”. Zooplankton eat the toxic and begin passing the toxins up the food chain, affecting edibles like clams, and ultimately working their way up to seabirds, marine mammals and humans. The resultant effect of this can be serious illness and most times death.

With the above development, developed nations have stated monitoring for toxic algal bloom, closing fisheries as necessary. This step has drastically reduced the occurrence of related human illness and death, although; has had the obvious economic cost of lousy income for fishers and related business does nothing to solve the problem for the marine life stock in the middle of the brown tide.

In addition, research has shown that nutrient-pollution-driven blooms of non-toxic algae and seaweed can also cause problem by reducing water to find food and blocking the sunlight needed by sea grasses which serve as nurseries for many important fish species.

At the demise of the overgrowths algal sink to the bottom of the river and start decomposing. The decomposing algal uses sizeable oxygen from the surrounding water and the decomposition process takes enough oxygen out of the water and the level fall too low to support normal aquatic life and the region becomes a coastal dead zone.

At the end of the day, the nutrient pollution eventually triggers usual outbreaks of fish deceases. For example, scientists have found that *Pfiesteria*, a tiny marine pathogen can thrive in nutrient-polluted water. To confirm this fact further, in 1991, one million menhaden fish in North Carolina’s Neuse River were killed in *Pfiesteria* outbreak; in 1997, several tidal creeks in the Chesapeake Bay watershed experienced *Pfiesteria* outbreaks, and many fish deaths occurred. All these cases were caused by a combination of nutrient pollution.

3.1. (b) Chemical Contamination

In many years past, many varieties of chemical have found its way into waterways and they continue to do so today more than before, chemical water pollution usually/typically occurs because of the following occurrences:

- (i) as a result of deliberate or intentional dumping of chemicals into the water
- (ii) as a result of failing pipes or storage tanks the chemicals seeped into ground water, streams or rivers
- (iii) as a result of industrial accidents, the chemical catastrophically contaminated waterways.
- (iv) as a result of the pollution settled out of polluted air or was precipitated out of polluted air.
- (v) Chemical were leached out of contaminated soil.

The above mentioned chemical contaminations are regarded as “point sources” of water pollution. In other words, non point-source chemical pollution also occurs via pesticides runoff farm fields and homeowners’ lawns, as well as runoff of automotive fluids and other chemicals from roads, parking lots, driveways and other surfaces.

Some of the effects of chemicals that has over polluted water are

- (1) Severe chemical spills and leaks into surface waters usually have an immediate effect on aquatic life (fish kill) e.t.c.
- (2) Chronic lower-level chemical pollution has more subtle effects with problems manifesting over a long period of time and sometimes being difficult to tie directly to the water pollution.
- (3) The human effects of chemical pollution in water can generally be viewed the same as any other form of chemical contaminating, water is just the delivery mechanism.

3.1 (c) Pesticides

This is a category of water pollution effects related to chemicals which are very important to this study. Pesticides are carried in rain water runoff from farm fields, suburban lawns, or road side embankment into waterways as part of a pest control effort.

Pesticides also have its effect as a type of water pollution.

- (1) The United States of America EPA has found widespread contamination of water ways by Atrazine, the second most commonly used herbicides in the USA. Atrazine causes feminization of male frogs even at concentrations in water as low as 0.1 parts per billion. Atrazine chemical water pollution has been noted in many centuries, including South Africa, Germany and Denmark. To this extent, the Natural Resources Defense Council notes that studies indicate the chemical may be linked to a number of human cancers including prostate cancer and non-Hodgkin's Lymphoma. A university of California San Francisco study found that Atrazine can affect human reproductive and developmental processes by disrupting human hormone activity.
- (2) The second effect is glyphosphate (Roundup) another of the world's most common herbicides was found to cause a 70% decline in frog biodiversity and an 86% decline in the total mass of tadpoles when the glyphosphate got into water.
- (3) The effect of pesticides has been found in well water in countries such as India, Netherlands, Israel, Australia, Italy, Japan, U.S and Canada. The chemical pesticide pollution is contamination of drinking water is a particular problem in rural agricultural areas where this type of chemical use is very heavy and drinking water supplies some directly from groundwater or surface water.
- (4) Pesticides can migrate via water into the food chain as well, ultimately being consumed by humans or animals in food. There were series of food contamination through sources of water which had migrated into it during the processing of such food unsuspecting by the farmer/ the manufacturing firms.
- (5) Where the pesticides are indiscriminately used usually result in infamous cases of pesticides pollution, widespread use of insecticides DDT polluted waterways, contaminating fish and ultimately poisoning bald eagles and other animals that ate or consume the fish. DDE, the principal breakdown product of DDT, built up in the fatty tissues of female eagle eggs and prevented sufficient calcium, being released to produce strong egg shells. The thin shells would break when the parents sat on the eggs to keep them warm. DDT affected many other species also. The case against DDT and other pesticides first came into the lime light in the classic book, entitled '*Silent Spring*'

authored by Rachel Carson (in addition there were many related articles about the potentials un-burning of DDT: DDT and malaria)

(6) Generally speaking, in terms of effects on human health aside from the aquatic lives, pesticides can affect the following organs of human body

- affect and/damage the nervous system;
- cause liver damage;
- damage DNA and cause a variety of cancers in most of the sensitive organs;
- cause reproductive and endocrine damage;
- cause other acutely toxic or chronic effects.

3.1 (d) **Oil and Petroleum Chemicals**

When water is polluted by oil and petroleum chemicals, its components are degraded and dispersed by evaporation, photochemical reactions or bacterial degradation, where others are more resistant and may persist for many years particularly in shallow waters with widdy sediments

However, much scientific work remains to be done on the effect that petroleum pollution has on plants and animals, we do know a few things:

- Exposure to oil or its constituent's chemicals can alter the ecology of aquatic habitats and the physiology of marine organisms.
- Scientists know that oil can seep into marsh and sub-tidal sediments and hide there for decades, negatively affecting marsh gasses, marine worms, and other aquatic life forms that live in, on, or wear the sediments. Furthermore, evidence strongly shows that components of crude oil called polycyclic aromatic hydrocarbons (PAHs) persist in the marine environment for years and are no doubt toxic to marine life at concentrations in the low part-per-billion range. Chronic exposure to PAHs can affect development of marine organisms; increase acceptability to decrease and jeopardize normal reproductive cycles in many marine specie. Before the Exxon Valdez oil spill, the effects of the pollution were thought to be relatively short-term-a-year or two. The effect of the Valdez, however lasted up to 8 or 9 years, and in same ways still persists today. Research has shown that marine mammals, sea ducks

and some fish species suffered high mortality for years after the spill because they are invertebrates contaminated by the hidden oil or ate oil directly while feeding.

3.1 (e) Mercury

This substance called mercury finds its way into water primarily through air pollution from coal-fired power plants and some other industrial processes. The element mercury in the water is converted to methyl-mercury by certain bacteria, after which it moves up the food chain of fish gobbling each other up. In the end, the big fish may end up on your dinner table or plate – sea bass, mackerel, swordfish, tuna or halibut, for example. The effect of this substance on humans and the hazards that mercury constitutes to human health are already pretty well understood. To this extent the more we study, the worse the news turn to be. In a similar vein, the USEPA keeps lowering its “safe exposure level”. Young children and fetuses are most at risk because their systems are still developing. Research has shown that, exposure to mercury in the womb can cause neurological problems, including motor reflexes, learning deficits, delayed or incomplete mental development, autism and brain damage, mercury in adults is also a problem, causing:

- (i) central nervous system effect, like Parkinson’s disease, multiple sclerosis and Alzheimer’s diseases;
- (ii) heart disease and
- (iii) In several cases, causing death or irreversibly damaging areas of the brain

In that respect, animals in any part of the food chain affected by the bioaccumulation of mercury can suffer the effects of mercury pollution possible effects include death, reduced production, slower/retarding growth and development and abnormal behavior.

3.1 (f) Other Chemicals:

Tens of thousands of chemical are used in industrial processes and are found in car-maintenance products, toiletries, household’s cleaners and many other consumer products our correct regimes for controlling whether these chemicals get into the environment are not sufficient for keeping them out of the water and the potential myriad effects are worrisome.

From various researches carried, it is crystal clear that many chemicals can have direct toxic effects on aquatic life. Industrial spills into rivers invariably kill fish for miles downstream. However, chronic chemicals pollution in waterways is an even bigger

problem. The number of US River miles on which people have been advised to restrict their consumption of fish has risen sharply in the last two decades and most states routinely issue advisories on consumption of fish from rivers and streams.

A new research has shown the hormone disrupting character of many chemicals contained in sewage discharges is, chemicals contained in sewage discharges into the waters off the Southern region. For instance, California coast are thought to be responsible for “intersex” fish. In the same vein, chemicals in the water are also thought to be responsible for egg-growing male fish in Maryland’s Potomac River – possibly the effect of excreted birth-control chemicals.

The effect of hormone-disrupting chemicals include interrupted sexual development; thyroid system disorders; inability to breed; reduced immune response; and abnormal mating and parenting behaviours. From the human angle, endocrine disruptors are thought to lead to degraded immune function; mental impairment, decrease fertility and increase in some types of cancers are some of the long and short term impact of chemical.

3.1 (g) Mining

There is no gainsaying that there are a sizeable number of negative effects of water-pollution from mining operations. A example of this, is the acid mine drainage

3.1 (g) (i) Acid mine drainage occurs when rain or surface water flows over exposed rock and soil, it can combine with naturally occurring sulfur to form sulfuric acid as a result, the acidified rainwater eventually finds its way to streams and groundwater’s, polluting them and impacting local aquatic life. Some streams/small rivers can became so acidic – more acidic than car battery acid – the aquatic ecosystem is completely destroyed. The same leaching process that causes acidic mine drainage can impact heavy-metal pollutants from the soil and rock as well.

3.1 (g) (ii) Spills and Leaks

Another form of mining pollution is spills and leaks. This could be as a result of a leak in the system of a cyanide leach heap or a breach in a coal-slurry impoundment dam, the result is the same – pollution of streams, rivers and groundwater, killing aquatic life and poisoning drinking water.

3.1 (g) (iii) Mountain Top Removal Mining

In this aspect, the tops of coal-rich mountains are removed and the overburden is dumped into nearby valleys, in burying stream habitats altogether, with the obvious catastrophic effect on whatever life forms lived in or around the stream.

3.1 (h) Water pollution Effects of Mining Disasters

In the US State of Tennessee, in 2008, an impoundment dam failed and 5.4 million cubic yards of coal ash spilled into adjacent waterways, killing fish, damaging property and threatening drinking water supplies. Residents now face concerns – about the long-term health effects from the ash which contains numerous harmful contaminants such as arsenic. At this juncture, it should be noted that in this case the spill was not related to coal mining it was stored coal ash, the waste water that results from burning coal in a power plant.

Before this occurrence, in 2000, a tailings dam split open at the Balamare mine in Rumania. This accident sent some more 100,000 tons of waste water and 20,000 tons of fish contaminated with cyanide copper and heavy metals into the Tisza River and eventually into the Danuba destroying 1,240 tons of fish and polluting the drinking water supplies of 2.5 million people.

3.1 (i) Marine Debris

Marine debris is trash in the ocean. Trash fouls inland waterways calls marine debris is one of the world's most pervasive marine pollution problems. The marine debris in issue includes escaped inland trash and garbage thrown overboard by ships and beaters – plastic bottles and bags, six-pack rings, cigarette butts, Styrofoam, e.t.c. Marine life's/animals can swallow the trash items which often look similar to prey they would normally eat, or the trash item may have barnacles or other delectable attaché and is inadvertently ingested with the food. For examples, sea turtles will eat a plastic bag believing it to be a jelly-fish. The bags can cause an intestinal blockage and sometimes death.

From the researchers discovery is new and potentially devastating effect of marine debris is emerging. After years of degradation of sea, plastic breaks up. The plastic breaks has not biodegraded but rather has disintegrated into very small pieces. Marine animals near the bottom of the food chain are now ingesting these teeny-tiny little pieces of plastic pollution. To this level how far up the food chain, the stuff will go is unknown.

Marine debris can also degrade coral reefs, sea grass beds and other aquatic habitats

3.7 Thermal Pollution

It is easy enough to see how discharging the heated-up water from a power plant into a river could cause problems for aquatic organisms used to having their water home stay at a firmly specific temperature. Indeed, industrial thermal pollution is a problem for our water ways – fish and other organisms adapted to a particular temperature range can be killed from thermal shock, and the extra heat may disrupt spawning or kill young fish.

Furthermore, warmer water temperatures lower the dissolved oxygen content of the water. That is, a double-whammy to aquatic organisms, since the warmer water also causes them to increase their respiration rates and consumes oxygen faster. In a nutshell all these increase aquatic organism's susceptibility to diseases, parasites and the effect of toxic chemicals.

The latest discovery global warming is impairing extra heat to our oceans which have absorbed about 20 times as much heat as the atmosphere over the past half century. The ocean is a very complex system, and scientists don't know yet what all of the effects of this type of "water pollution" will be but here are some likely ones:

- (i) Sea levels will rise, therefore increasing coastal flooding and inundation
- (ii) There will be more intense hurricanes as they gather additional strength from water surface of water

3.2 Temperature

Sensitive specie like corals will see tougher times, more than 2 decades, temperature in tropical water have increased nearly one degree fahrenheit. Although, this may not sound like much, but it is been enough to increase cases of coral bleaching. A further study in science estimated that if carbon dioxide releases continues at the current rate, by Mid-century Ocean conditions will make it impossible for mostly corals to survive.

However, increasing sea- surface temperatures are associated with the northward spread of an oyster pathogen in the eastern United States.

4.0 Conclusion

It is not an over statement that the inhabitants of Niger Delta Region and the oil firms equally face tougher challenges in tackling oil spillages in the area. This unit discusses other pollutants apart from oil pollution which include pesticide, acid mine drainage, mercury, PCB, Dioxins. Thermal pollution, marine debris, all these are discussed in the concluded unit.

5.0 Summary:

To this extent, other pollutants were discussed in this unit as stated in the concluding part – 4.0 above. Its effects and way out of the menace are equally enumerated; reasons for the occurrence, impact of each chemical pollutant are equally discussed.

6.0 Tutor Marked Assignment

- (1) Identify other pollutants
- (2) Discuss the economic importance of the various pollutions

7.0 References and Further Readings

- (1) Awogbade Soji and Sipasifina (01-July-2009) Environmental: Nigeria Wikipedia articles
- (2) Nigeria Tribune, Friday 9 April 2011
- (3) The Guardian Wednesday July 28, 2010 p. 46
- (4) Dharmendra S. Senghor (2007) Environmental Law, New Delhi, Prentice Hall of India
- (5) Lawrence Atsegbua *et al* (2003) Environmental Law in Nigeria: Theory and Practice: Lagos Ababa Press Ltd. P.63-80

UNIT 3

THE INDUSTRIAL WASTE MANAGEMENT AND CONTROL I

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Brief introduction to hazardous waste
 - 3.2 What is waste/hazardous substances
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (T.M.A)
- 7.0 References and Further Readings

1.0 Introduction

With the vastness of industrial activities across the nooks and crannies of Nigeria, several cases of polluting waste generation doubt changing for the worst on account of increased human activities. Wastes being generated by manufacturing industries constitute huge environmental pollutants (Stanley Opara, 2011)

It is pertinent to note that, industrial waste is produced from the activities of industrial organizations like factories, mills and mines. Historically, industrial waste generation has existed since the outset of the industrial revolution. Despite the use of non-renewable resources such as fuel, coal, and minerals has not helped matters either as the level of environmental pollution has continued to go up.

The environmental experts posited that industrial waste generation cannot be completely avoided, though their management is critical to the safety of the larger environment.

As a result, “all industrial and manufacturing activities must be well regulated with a view to assisting industries in the management of pollution problems arising from their activities”. This assertion was made by Mr. Adebola, Lagos State Environmental Protection Agency (LASEPA), General Manager. He reiterated further that regulators of the environment must remain as a matter of duty focused in the course of enforcing industrial

environmental standards. They must not relent in offering necessary assistance to industries in their capacity and efforts to meet the given discharge standards.

2.0 Objectives

The main objective of this unit is to imbibe the following at the end of the lessons:

- (i) Introduce the students to industrial waste management
- (ii) Efforts directed towards making adequate control laws to combating the menace of industrial waste management on our environment.

3.0 Main Content

3.1.1 Industrial Waste Management

Some of the environmental challenges posed by industries include discharge of untreated or partially treated effluent into public drains; air, water, noise and soil pollution; improper social waste management as well as improper spend of oil management.

Controls over the creation, storage and disposal of waste, even though they have a long heritage, have been transformed in the last twenty years particularly in the tail end of 1980s, waste controls have been introduced. This is a response to specific major pollution or contamination incidents. From this time under review till date, accumulations of noxious matter were subjected to powers then duties – of inspection under public health legislation. No wonder WHO declared that waste is the biggest danger to health in Lagos (Punch 15, 2010).

Nigeria being a developing economy is faced with different environmental problems. These problems became compounded due to total and practical lack of effective regulatory policies on hazardous waste management and lack of monitoring system in place on environmental issues in the late seventies to early eighties. This made the country susceptible recipient of surreptitiously exported “trans-boundary hazardous waste dump by developed and industrialized nations. This was due largely to the nefarious activities of waste merchants from industrialized nations, a wicked action described as “Trans-boundary Hazardous Waste Dump” (Olanipekun O. *et al.*, 2009)

Ibitayo (2006) corroborating this fact on trans-boundary dumping of hazardous waste; he cited hazardous waste as an inevitable by-product of industrial development and several manufacturing processes a situation in which Nigeria is not spared from.

Hitherto, the first recorded incidence was in 1988 when more than 4,000 tons of toxic waste from Italy was dumped in Koko Port in Delta Region of Nigeria. The subsequent events that followed this ugly incident were well elucidated in the Environmental Law I, edited and published by NOUN written by Ademola A. Taiwo (2010).

Despite series of environmental problems and the activities of foreign HW waste merchants faced in the country, the Government of Nigeria through activities of the Federal Ministry of Environment (FMOEWW) has mapped effective strategy on tracking hazardous waste to ensure effective disposal.

However, the central issue of this unit is essentially to discuss how waste or hazardous substances are being processed or managed in some developed countries, second generation countries especially the United Kingdom, India and compare it with waste processes in Africa, particularly in Nigeria.

At this juncture, it is necessary to define the res of this topic

3.1.2 Waste/Hazardous Substances Defined?

The term WASTE means “anything or something that is not or no longer useful and is to be thrown away, or disposed of Oxford Advanced Learners’ Dictionary 4th Edition).

In another perspective, Hutchinson Encyclopedia (1992) defined waste as materials that are no longer needed and are discarded. Examples are household waste, medical waste (which often contains toxic chemicals, industrial waste (which may contain organisms that cause diseased and nuclear waste (which is radioactive). He posited further that, waste can be recycled; by recycling, some materials in waste can be reclaimed for further use.

It was reported in 1990 by the Organization for Economic Cooperation and Development (OECD) that the industrialized nations generated 2 billion tonnes of wastes. In the USA alone, 40 tonnes of solid waste is generated annually per person.

Purdue M. (1990: 259) defining waste from land Law perspective, that the term waste in land law, means any act or omission which results in a charge in the land for better or for worse e.g. Conversion of arable land into a timber plantation.

The World Health Organization (WHO) defined as something which the owner no longer wants at a given place and time and which has so current or perceived market value. However, this is the first definition that accorded market value to waste.

Hazardous substance is defined waste substance usually generated by industry, which represents a hazard in the environment or to people living or working nearby. Examples include radioactive wastes, acidic resins, arsenic residues, residual hardening salts, lead, mercury nonferrous sludges, organic solvents and pesticides.

Part 7, S106, of National environmental (Sanitation and Wastes Control) Regulations 2009 under “Interpretations” defined “Hazardous Waste” as: any waste or combination of wastes that exhibits ignitable, corrosive, reactive, or toxic characteristics and poses a substantial danger, now or in future, to human, plant or animal life, and which therefore cannot be handled or disposed of without special precautions; “Industrial Waste” means waste arising from processing and manufacturing industries or trade undertakings and can take the form of liquid, non liquid, solid and gaseous substances, “Waste Management” means:

- (a) Waste management planning, handling, treatment, processing and disposal, including the supervision of these operations as well as the measures for protection during the operation of the facilities, and installations for waste disposal and the care taken after the termination of their operations generations and of its negative impact on the environment and human life and health, including waste handling;
- (b) The administrative and operational activities, which are used in handling, packaging, treatment, conditioning, reducing, recycling, reusing, storage and disposal of waste.

Their economic disposal or recycling is the subject of research all over the world. For instance the Environmental export official report shows that the United Kingdom imported 41,000 tonnes of hazardous waste for disposal in 1989 and recently more than 180,000 tonnes of waste. The largest proportion of such hazardous waste which came from Europe and extra America nations.

The report by WHO says that Lagos alone in Nigeria generates 10,000 tonnes of solid waste daily. Solid waste includes garbage, refuse and other industrial materials resulting from human activities. The state has not being able to find a lasting solution to this problem. (The Punch, 2006, in African Regional Health Report)

From the European Union perspectives, waste is defined as “any substance or objects which the producer or the person in possession of it discards or intends or is required to be discarded” (Waste Management Licensing Regulation 1999, Part II Schedule 4).

Dharmendra S. Senghor (2007:13) described the waste/hazardous substances as the “growing chemicalisation of our life style” It was analysed in the case of tragic Bhopal disaster in Indian that hazardous substances and chemical wastes are anything that is injurious to human health and pollute the general environment (Halter Samuel, 1975: 195 – 6).

The United Kingdom Environmental Protection Act of 1990 defines waste as

- (a) any substance which constitutes a scrap material an effluent or other unwanted surplus substance arising from the application of any process (See S75(2)) of the Environmental Act of United Kingdom 1990 as amended;
- (b) any substance or article, which needs to be disposed of as being broken, worn out contaminated or otherwise spoiled.

In addition, anything which is discarded or otherwise dealt with as otherwise spoiled, if it were waste shall be presumed to be waste unless the contrary is proved.

Although, it worth of note as Professor Lawrence Atsegbua rightly pointed out that the federal Environmental Protection Agency Act of 1988 does not define waste. Some states statutes in Nigeria like Lagos and Oyo States made spirited efforts to define waste as:

- (a) wastes of all descriptions (This is in line with S32, Lagos Environmental Sanitation Edict of 1985 particularly No 12)
- (b) any substance which constitutes scrap material, an effluent, or other application of any process. However with various attempt by the environment different Acts and environmental bodies to define hazardous waste; it is trite at this juncture to conclude in line with the reasoning of Atsegbua *et al* that ‘Waste is any substance or object, whose owner or producer intends, or is required to discard because it is useless, or lacks market value.

4.0 Conclusion

The issue discussed in this unit can not be concluded, therefore, the discussion still continues in part II of the same topic.

6.0 Tutor Marked Assignment

Critically analyse two of the classical definitions mentioned in this unit.

7.0 References and Further Readings

[See subsequent units].

UNIT 4

THE INDUSTRIAL WASTE MANAGEMENT AND CONTROL II

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 classification of Wastes
 - 3.2 Sources of wastes management in Europe, United States of America and Nigeria
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (T.M.A)
- 7.0 References and Further Readings

1.0 Introduction

It is important to discuss these topics under this unit separately for easy understanding of various classes of wastes and its management. The management of wastes cut across the nations of the world. But this unit discusses wastes management in Europe, United States of America and Nigeria.

2.0 Objectives

The major objectives of this unit are:

- i. to let the students know various categories of wastes
- ii. to let the students and readers know the management procedures in Nigeria and outside Nigeria specifically United Kingdom and America.

3.0 Main Contents

3.1 Classifications of Wastes

Hazardous waste can be classified in accordance with;

- (i) its sources
- (ii) its degree of harmful to human health and the environment where he lives

- (iii) the various appropriate forms of control to deal with menace (of hazardous waste)

Wastes can be typologised into

- (1) control waste and
- (2) harmful/dangerous waste

Control wastes are domestic wastes such as food, office wastes, commercial wastes and wastes from stores. This aspects waste can be treated and disposed of.

The area or aspects that concern this study is the dangerous or special waste. Dangerous because it is difficult to treat or keep or dispose of as in (i) above. Examples of this type of wastes are acid, alkaline and lead, mercury, methyl leakage of oleum carbon dioxide methane, chlorofluorocarbonate, acid rain, ozone layer depletion all these are devastating effects all over the world especially the ocean dwelling who may as a result run out of oxygen, the cesspool rivers from industrial cities all around the world may fill the oceans with toxic mercury. All these wastes are dangerous to human life if swallowed direct or taken through aquatics, inhaled or in contact with the skin or eyes (R. Malcolm 1992:9; Goldfarb D. (Ed.) 1983:3; Giddings J. Calvin 1973:226 – 7).

3.2 Sources of Wastes Management

At this level, for the purpose of clarification of key issues under discussion in this unit which is, waste management in Nigeria and Europe, it is necessary to elucidate what waste management meant? According to Professor Atsegbua it simply means:

“The collection, keeping, treatment and disposal of waste in such a way as to render them harmless to human life, animal life, the ecology and the environment in general”.

The author of this piece concurred in totality with definition of the Environmentalist.

3.2.1 Sources of Waste Management in the United Kingdom

The United Kingdom is a signatory to various Conventions International agreement, treaties and protocols which form part of her sources of waste management. These are:

- (i) Base Convention on the control of Trans-Boundary Movement of Hazardous Waste and Their Disposal
- (ii) Vienna Convention for the protection of the Ozone Layer (1985)
- (iii) Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
- (iv) United Nations Convention on the Law of the Sea (1982)

- (v) Various EEC Directives on Waste
- (vi) Rio Declaration (United Nations Conference on the Environment and Development Agenda 21)
- (vii) Maastricht Treaty signed on February 7th 1992 by members of European community of which the U.K is one.

Article 130R (i) of the Maastricht Treaty set out the objective for the community. These objectives includes;

- (i) Preserve, protect and improve the quality of the environment
- (ii) Ensure a prudent and national utilization of natural resources
- (iii) Promote measures at international level, to deal with region or worldwide environmental problems.

3.2.2 Sources of Wastes Management in India

The sources of wastes management in India began during the colonial days and the sources includes;

- (a) The provision Act 1919
- (b) The Dangerous Drugs Act 1930
- (c) Inflammable Substances Act 1952
- (d) Preventive of Food Adulteration Act 1954
- (e) The Insecticides Act 1968
- Deposits of poisonous waste Act 1972
- (f) Monopolies and Restrictive Trade Practices Act (MRTP) Act 1969
- (g) The Water (Prevention and Control of Pollution) Act 1974
- Air (Prevention and Control pollution) Act 1981
- (h) Statement of Objects and Reasons of environment (Protection) Act 1986
- (i) The Manufacture, Storage and Import of Hazardous Chemical Rules (Second Amendment) 1990
- (j) Hazardous Wastes (Management and Handling) Rules 1989
- (k) The manufacture storage and import of hazardous chemical rules 1989
- (l) The manufacture storage and import of hazardous chemical rules 1990

Indian federation is signatory to all the Universal Declaration on Environmental Matters' Conventions, Treaties and Agreements.

3.2.3 Sources of Wastes Management in Nigeria

The history of wastes management in Nigeria can be traced to the period of colonization; the ordinance made during the pre- and post independence laws are encouraged as follows;

- (1) Water Works Act 1915
- (2) Public Health Act, 1917
- (3) Public Sanitation Ordinance 1925
- (4) Nigeria Local Statutes enacted after independence including various Acts, Laws, Decrees and Edicts. Major example of these statutes are
 - (i) FEPA Act 1988 (Cap 113 as amended by Decree 59 of 1992)
 - (ii) Petroleum Act of 1969
 - (iii) Oil in Navigable Waters Act of 1968
 - (iv) Harmful Waste (Special Criminal Provision) Act of 19888 Cap 165) LFRN
 - (v) National Environmental (sanitation and Waste Control) Regulation, 2009
 - (vi) Lagos State Environmental Pollution Control Edict of 19991
 - (vii) Environmental Impact Assessment (EIA) Decree No 86, 1992
 - (viii) Anambra State Environmental Sanitation Authority Edict No 15. The National Environmental Protection (Effluent Limitations) Regulation (S13) 1991. Guidelines and Standard for Environmental Pollution Control in Nigeria, 1991
 - (ix) Kano State Environmental Protection and Planning Agency Edict of 1990
 - (x) Oyo State Environmental Sanitation Edict 1990
 - (xi) Criminal Code Act of 1916 (Cap 77) (In addition to all these, see Ilegbume "Legal Regulations of Industrial Waste Management" in Environmental Law and Sustainable Development in Nigeria; Ajomo and Adewale O. Edition 1994:83); Lawrence Atsegbua *et al* (2003:104) Environmental Law in Nigeria: Theory and Practice Like India, Australia, U.S. and European Union in Nigeria's Obligation on multilateral Environmental Agreement (MEAS) and Regional Conventions, Agreement Treaties and Protocol which Nigeria has ratified related to key global

issues such as climate change, biodiversity, toxic chemicals and hazardous waste management to mention a few. These include:

- (a) Montreal Protocol on substances that deplete the ozone layer 1987
- (b) Vienna Convention on the protection of the ozone layer 1987;
- (c) Basel Convention on the control of trans-boundary movement of hazardous wastes, and their disposal 1989;
- (d) Stockholm Convention on Persistent Organic Pollutions (POPs)
- (e) Rottewan Convention or prior informed consent procedure for certain hazardous chemicals and pesticides in international trade.
- (f) Organisation of African Unity (OAU) now Africa Union (AU): Convention, banning outright importation of all forms of toxic wastes into Africa and controlling trans-boundary movement of such wastes generated in Africa, signed in Bamako, Mali on 30th January, 1991.

3.2.4 Sources of Wastes Management in United States

- (a) US Statutes and Regulations Standards Applicable to generators of hazardous wastes
 - Experts of hazardous wastes 40 CFR S26 and subpart 1995.
- (b) Notification concerning the Basel Convention's Potentials Implicative for Hazardous Waste Export and Imports S7 Fed. Reg. 20602 (1992)
- (c) Foreign Statutes and Regulations
 - Council regulation 259/95 of 1st February 1995 on the supervision and control of shipments of waste within, into and out of the European country 1993 OJ (L30)I
 - Council regulation 1836/93 of 29 June 1993 Aclaving voluntary community Eco-management and Audit Scheme 1995 OJ (L. 168) I
 - Council Directive 578/67 of 27 June 1967 on the Approximation of Laws Regulations and Administrative Provisions Relating to the Classification, Packaging and Labelling of Dangerous Substances 1967 O.J. (L196) I particularly as amended by council directive 907/76 1976 OJ (L360)I
 - Council Directive 501/82 of 5 August 1982 on the Major Accident Hazards of certain industrial activities 1982 OJ (L230) I. as amended by Council Directive 2/6/87 of 28

March 19887 OJ (L85) 36 and Council directive 610/88 of 7 December 1988 OJ (L336) 14.

3.2.5 Treaties and Related Materials

- A. 1989 Essel Convention on the control of Transboundary Movements of Hazardous Wastes and their disposal March 22, 1989, reported in 28 ILM649 (1989)
- Decision of the Council concerning the control of Trans-Frontier Movements of Wastes Destined for Recovery Operation, 1992 O.J (C92)93
 - Agreement between the United States of America and the United Mexican States on cooperation for the Protection and Improvement of the Environment in the Border Area, August 14, 1983, US-MEX, T.I.A. S.NO 1082) as amended by Annex III
 - Agreement of cooperation between the United States of America and the United Mexican States regarding the Transboundary Shipments of Hazardous Wastes and Hazardous Substances, November 12, 1986, US – Mex T.L.A.S No 11269
 - Agreement between the Government of Canada and the Government of the USA concerning the Transboundary Movement of Hazardous Waste October 28, 1986, Can –US, T.I.A.S No 1109
 - North American Agreement on Environmental Cooperation between Government of the USA, the Government of Canada and the Government of the Mexican States, September 13, 1993, US – Can-Mex (1993)
- B. Other Official Documents and Sources
1. The Commission on Environmental Law of IUCN. The World Conservation Union, AGENDA 21: EARTH's ACTION PLAN (Nicholas Robinson ed. (1993).
 2. Sources of Information Concerning Environmental Procedures and Guidelines of US Multilateral Financing Institutions.

4.0 Conclusion

In this unit, various classes of wastes has been discussed with the rules of managing such wastes in India and America. The discussion continues in the next unit.

6.0 Tutor Marked Assignment

- i. Identify different classes of wastes in your country and discuss any four.
- ii. Critically discuss the lapses in the management of wastes in both advanced and developing countries.

7.0 References and Further Readings

[See the next unit]

UNIT 5

THE INDUSTRIAL WASTE MANAGEMENT AND CONTROL III

- 1.0 Introduction
- 2.0 Objectives
- 8.0 Main Contents
 - 3.1 Wastes Management in United Kingdom and Nigeria
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment (T.M.A)
- 7.0 References and Further Readings

1.0 Introduction

Wastes management rules in Nigeria is similar to that of United Kingdom by virtue of the facts that Nigeria was colonized by Britain as a result she is a member of Commonwealth of Nations. It is only in the recent times that Nigeria started enacting new environmental laws. In this unit, the wastes management in Nigeria and United Kingdom shall be elucidated.

2.0 Objectives

The major objectives of this unit are to highlights to the students and readers the management of wastes in both United Kingdom and Nigeria.

3.0 Main Contents

3.1 Wastes Management in the United Kingdom and Nigeria

The Environmental Protection Act of 1990 in the United Kingdom is one of the major sources of waste management. Various provisions of this Act provides for waste management in the Kingdom. For instances Section 30 of the UK, EPA provides regulations for collection, disposal and utilization of waste. Section 35 of the EPA equally provides for waste disposal authorities, which are responsible for awarding contracts to waste disposal contractors, who are likely to be companies own by the local council or private companies own by individuals. It is the responsibility of EPA, under Section 35 to issue permit or licenses to various waste management companies. Waste in the UK cannot be collected,

deposited, treated or disposed without EPA's permission through issuances of licenses to that effect.

Similarly, most of the counties in Nigeria have Waste Disposal Management Board like in the UK, Lagos State for example have well empowered Waste Disposal Management Board (WDMB) and Oyo State have Oyo State Waste Management Board (OSWMB) with major responsibility of collection, disposing and prosecution of environmental waste non-compliance elements in these states. In Lagos, most of these wastes collected are disposed into various landfills and larger parts are used as sand fill to regain land from the seas at various locations in the states.

As a result, Section 33 of the EPA provides that it is an offence to treat, keep/collect and dispose of waste no matter the quantity in such a manner likely to cause pollution to the environment and harmful to human health. In Nigeria, the National Environmental Standards and Regulations Enforcement Agency Act, 2007 provides that it is an offence under the provisions of this ACT (FEPA) to flout standards guidelines set out therein by any individual or group of individuals or cooperation or government establishments. These standards for various environmental mediums must be observed and enforced by the Waste Management administrators.

However, the United Kingdom Environmental Protection Act provides for 'a duty of care' particularly on the part of the producers and waste management administrators. The duty of care emphasized in this regards is not different from that provided for in the decision of the court in *Donoghue V. Stevenson* (1932) AC 562. Hence, this is a common law doctrine that imposes a duty of care not to injure others by acts or omissions. It is the responsibility of wastes producers for its disposal. That is, taking or giving the waste in question to an official carrier(s) or collection(s) or to appropriate designated place of refuse/waste dumping (See Section 34 of the EPA, UK Act of 1990)

Section 34 stipulated the prevention of concomitance of one of the statutory offences; the escape of waste; that waste is transferred to an authorized person; and that a written description goes with the waste so that others can comply with the duty (as stipulated in the EPA)

Atsegbua *et al* (2003:107) analysed the provision of this Act succinctly that the provisions focuses on the control of waste prior to it disposal and the steps to be taken on disposal. They posited further that, the only exception to this Act rule on duty of care is in the case of a householder who produces domestic waste from the home. Therefore he is not a holder of waste under the Act, and is not subject to the duty of care.

From Nigeria's FEPA (now NESREA 2007) perspective, Section 20 (1& 2) is similar to the UK's EPA, Section 34 which provides for a duty of care and liability on the part of any person that discharges substances of harmful quantity on Nigeria lands, waters or the adjoining shorelines which is prohibited. Any person who violates the section of the Act shall upon conviction, be liable to pay the sum not exceeding ₦100,000.00, in the case of corporate bodies, ₦500,000.00 and additional final fine of ₦1,000.00 for everyday the offences subsists (See National Environmental Standards and Regulations Enforcement Agency NESREA) motto: ... ensuring a cleaner and healthier environment for Nigerians: Act No 58 of 1980 and as amended in 2007); This is in pari material with part v, III. Penalties, Sections 94 to 104 of National Environmental (Sanitation and Wastes Control) Regulations 2009, No 60, Volume 96.

3.1.1 Different Ways of Managing Wastes

There are two major ways by which wastes can be managed to the advantages of the society. That is, recycling and landfill.

3.1.2 Recycling

Recycling is the commonest known way of managing waste in the developed countries and the developing countries equally struggling to manage their hazardous wastes. This is a way of producing a useful material from the wastes products. Although, this will involve at least partly, more demanding and detailed targets for recycling and re-use. This recycling method has been divided into two sub-headings by the Environmental experts as;

- (i) The Waste to be reclaimed; and
- (ii) Wastes sorted out into various categories

In an attempt to achieve these, the waste managers provide separate dust/waste bins for the different commodities.

Second method is the provision of coloured bags for householders for different types of wastes generated from domestic (home) source. This method has been highly successful in Ghana and Germany because householder responded positively to its application.

U.K and other European nations equally advocate recycling method as one of the means of dealing with the menace of wastes. The method of recycling in U.K can be found in government white paper on the environmental management where a target of 25% of domestic wastes to be recycled by the year 2000. “S106 part 7, of 2009 Act defined waste Recycling as obtaining substances from waste and their utilization as a substitution of primary raw materials, or use if proportion of the substances containing in the waste for their initial purpose, or further purposes excluding the direct use of the energy of the waste.

3.1.3 Land fill

Landfill is not known to most parts of the nations of the world, in fact, it is the most common method of waste management. Nigeria, US, India and UK are not exempted from the application of this method. It requires digging of a hole on the ground, and filling it with hazardous rubbish and where there is existing deep ground; waste can be used to fill it. Section 35 of EPA, UK, authorize the waste managers to licence the companies who specializes in landfill and ensure that the landfill is not done in such a way to injure the neighbours in the area. To ensure compliance, the Act empowered the officers to visit the scene of their landfill and if the organizes – land fillers were not effective in their activities; the licence can be withdrawn or outrightly revoked.

In Nigeria, there are landfills in most of the states, managed by local council body, though subject to various rules of maintaining standards provided by the NESREA on proper management of landfills (See Guide and Standard on Prevention of Environmental Pollution in Nigeria 1991 and NESREA 2007 (as amended); National Environmental (Sanitation and Wastes Control) Regulations 2009, Part 6, S105)

It is disheartening to note that, many states and local governments in Nigeria have not passed any major Laws on waste management, so as to assist NESREA to ensure full compliance with the National Waste Management Regulations 2007 despite the olive branch stretched out by Part 56, S105 of the National Environmental Regulation of 2009 that;

As part of the Agency's Strategic Alliance Programme on Environmental Sanitation and Waste shall ensure that their programmes conform to the Agency's programme on same for proper control, all states and local government areas harmonization and implementation as contained in Schedule 8 to these regulations.

3.1.4 Other Uses of Wastes

A third concern is an anticipated shift from landfill and recycling and towards alternative forms of disposal. It is intended that the proportion of industrial waste going to landfill should be reduced to a reasonable percentage and converted to electricity. The research on this development is ongoing. The substance of waste policy and utilization has undergone a great transformation in this period.

Another development is the basic objectives which are prescribed for the national strategy centered on five basic ideas; proximity and self-sufficiency; the precautionary principle; the polluter pays principle; electricity generation and the 'waste hierarchy'. The implementation of the policies set out in the strategies will depend on a complex interaction between waste minimization, recycling and disposal options, by different authorities under different registries. The hierarchy of waste management options will be considered which has been part of less formal UK waste policy for a number of years (See Circular 11/94 April 1994).

The hierarchy requires that:

- (a) Subject to the best practicable environmental option in each case, waste management should be based on a hierarchy in which the order of preference is:
 - (i) Reduction – by using technology which requires less material in production and produces less waste in manufacture and by producing long-lasting products with lower pollution potentials.
 - (ii) Re-use for example, returnable bottles and re-useable transit packaging;
 - (iii) Recovery-finding beneficial uses for waste including
 - i. Recycling it to produce a useable products;
 - ii. Composing it to create products such as soil conditioners and growing media for plants;
 - iii. Recovering energy from it either by burning it or by using landfill gas

- iv. Generation of electricity from the raw wastes
- v. Disposal by incineration or landfill without energy recovery and
- vi. Each of these options should be managed and where necessary regulated to prevent pollution of the environment or harm to human health

It is worth of note, that, some aspects of this policy are intended to give effect to legal obligations on the UK government.

4.0 Conclusion

This Unit discusses the industrial waste management and control law. This topic is elucidated in line with basic contents such as a brief Introduction to hazardous wastes; its importance and all the Acts put in place to curb incessant wastes disposal and its utilisation particularly in U.S, U.K and part of Nigeria. This unit shall be concluded in the next unit 4

5.0 Summary

Waste management is discussed with the United Kingdom, United States and Nigeria as a case study. Waste substances are equally defined, classes of hazardous wastes, sources of waste management and its management in United Kingdom, Nigeria and United States of America, treaties, agreement, protocols and related material in relation to environmental issues are also briefly highlighted in this unit. The National Environmental Standards and Regulations Enforcement Agency (NESREA) Act 2007; the main sources of enforcement and penalties for environmental non-compliance in the National Environmental (Sanitation and Wastes Control) Regulations 2009 are also discussed and their immense contribution to the environment hazardous wastes management.

6.0 Tutor Marked Assignment (TMA)

- i. Define the following terms:
 - (a) Wastes
 - (b) Waste management
 - (c) Hazardous management
- ii. “Waste is not totally wasteful; it can be re-used” (EPA 1990 and NESREA 2007).
Discuss
- iii. Highlight the legal control put in place by the US, UK and Nigeria governments at various times to control wastes

7.0 References for Further Readings

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- iii. National Environmental Standards and Regulations Enforcement Agency (NESREA) 2007
- iv. Hutlter Samuel (1975) "Man & His Environmental Law Health
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- x. Dharmendra S. Senghor (2007) *Environmental Law*, New Delhi, Prentice-Hall of India p. 19 – 23
- xi. *The Punch*, Monday June 6, 2011 p. 55
- xii. *The Punch*, Wednesday November 15, 2006, p. 3

UNIT 6

THE INDUSTRIAL WASTE MANAGEMENT AND CONTROL IV

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Hazardous Waste management in Nigeria, India and Europe (U.K)
 - 3.2 Effects of Mismanagement of Waste
 - 3.3 Recommendations on the way forward
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

Both natural and synthesized chemical have great impact on a rapidly industrializing and technologically advancing society. Most chemicals are safe or present little danger to the environment of human health when handled properly and with care. In other words, some industrial activities involving certain hazardous chemicals have been the present and potential cause of serious of injuries, death and damage in the immediate vicinity of the site and sometimes beyond it. Therefore, the need for the proper assessment of the risk posed by these chemicals and of regular care during the cause of their manufacture, processing, treatment, packaging, storage, transport, use and sales e.t.c. is more actively felt now. The hazardous waste management in Nigeria, India and UK shall be discussed in this unit.

2.0 Objectives

The main objective is to let the student know the following at the end of this discussion;

- (i) Meaning of industrial wastes
- (ii) Hazardous waste in the three particular referenced countries
- (iii) Effect of mismanagement of waste and recommendations

3.0 Main Contents

3.1 Hazardous Waste Management in Nigeria

Regardless of series of environmental problem and the activities of foreign Hazardous Waste (HW) merchants faced in Nigeria, the Nigerian Environment through various activities of the Federal Ministry of Environmental has mapped effective strategies for tracking hazardous waste to ensure effective and hygienic disposal. The Basel regional co-ordinating centre located at Ibadan, has achieved in recycling and re-use through innovative research and conversion of hazardous materials. Indigenous companies like Boskel are meeting industrialized standard in the use of smokeless flame technology for treatment and vetiva that is locally grown is of great landmark in remediation of impacted sites (Olanipekun O. *et. al.*, :1)

However, industrial wastes could be toxic or hazardous and some are radioactive. They are regarded as toxic or hazardous, if by their nature, they pose a direct threat to human and animal health, either by ingestion through the food chain, respiration or through skin contact.

As earlier stated, the management of this waste is considered to be extremely critical internationally. Therefore to reduce the menace of the toxic or hazardous waste, the following Legislation Regulating Hazardous Waste Management both national and international includes:

- (i) Basel Convention on the Control of the Trans-boundary Movement of hazardous Matter and their Disposal. This was adopted in 1989, by both the United Kingdom and Nigeria;
- (ii) Rotterdam Convention on the prior informed consent procedure (PIP) for certain chemicals and pesticides in international trade.
- (iii) Stockholm convention on persistent organic pollution (POPs) Convention e.t.c. and also
- (iv) The Harmful Waste Act, Decree 42 which made it a criminal act to import, deal, dump or even trade in hazardous waste in Nigeria and its territory are part of proactive measures dealing with the management and disposal of hazardous waste in the country.
- (v) O.A.U Conventions Banning Importation of Toxic Waste into Africa and Trans-boundary movement of such waste signed in Bamako, Mali in 1999

- (vi) National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations 1991 S115 of the EPA 1990
- (vii) Harmful Waste Disposal (Special Criminal Provision Act) 1958, Cap 165 (LGN) 1991 and as amended 2004.

Article 9 of Basel Convention, makes it as duty for exporting waste generation countries to re-import such wastes.

NESREA prohibits the discharge of such hazardous wastes in harmful quantities into Nigeria land, waters or the adjoining shore lies (See Section 23 of NESREA, 2007).

Any person who violates this prohibition commits an offence, and is liable on conviction to pay a fine not exceeding ₦100,000. But if the offender is a corporate body, the fine is increased to ₦500,000 and an additional ₦10000. For everyday the offence subsists (See Section 24(4) NESREA Act.

The dumping of 4,000 tons of toxic from Italy in Koko in Bendel State (now Delta State) Nigeria in 1988 prompted the promulgation of the Harmful Waste (Special Criminal Provision Decree N0 42 and subsequently Management of Solid and Hazardous Waste Regulation of 1991; Sanitation and Waste Control Regulations 2009, No 28. These regulations made it a criminal act, punishable by life imprisonment to carry, deposit, transport/sell, buy, or negotiate in trade of harmful waste as mentioned below:

- (a) To identify toxic and extremely hazardous was dangerous to public health and environment
- (b) To provide surveillance and monitoring of dangerous waste until they are detoxicated and safely disposed of.
- (c) To provide guidelines necessary to establish a system of proper record keeping, sampling and labeling of dangerous and extremely hazardous waste.
- (d) To establish and provide suitable and necessary requirements to facilitate the disposal of hazardous waste, and
- (e) To research into possible re-use and recycling of hazardous wastes.

SELF ASSESSMENT TEST

- Trace the history of wastes management in Nigeria and highlight the government effort till date

3.2 Hazard Waste Management in India

The laws relating to hazardous substance were in existence even prior to the enactment of the Environment (Protection) Act 1986 (hereafter called Environmental Act). The laws put in place were less significant to cope with the degree of the current problem of environmental wastes and human health hazards. Most of the existing laws viz. the Insecticides Act, the Explosives Act, The Factories Act, The Petroleum Act, and The Indian Act touch the safety aspect of only a limited number of hazardous chemical. A critical look at the previous regulations shows that perhaps it was the Indian Penal Code which first dealt directly with negligent conduct in relation to poisonous substance. It states that:

“whoever does, with any poisonous substances, any act in a manner so rash or negligent as to endanger human life, or to be likely to cause hurt or injury to any person, or knowingly or negligently omits to take such order with any poisonous substances in his possession as is sufficient to guard against any probable danger to human life from such poisonous substance, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine which may extend to one thousand rupees, or with both”.

Other legislations for the management of hazardous substances are:

- (1) The Explosives Act No 4 of 1884
- (2) The Explosive Substance Act No 6 of 1908
- (3) The Insecticides Act No 46 of 1968
- (4) Water (Prevention and Control of Pollution) Act No 6 1974
- (5) The Factories, Act No 14 of 1981
- (6) Environmental Act No 29 of 1986
- (7) Hazardous Wastes (Handling and Management) Rule's, 1989 (hereafter referred to as Waste Rules under the Environmental Act, Rule 3(11))

The Hazardous Chemical and Wastes Rules made provisions for some general as well as specific requirements to be fulfilled by an occupier handling hazardous chemicals and generating hazardous waste. Where there is a contravention of any of the provisions of these Rules, a notice is served to remedy the contravention with such period which may be specified in the notice. It is therefore suggested that the notice period be limited to 45 days from the date of the receipt of the report, Baljeet S. Kapoor (2001:102 – 3).

In India, the body for the regulation and administration of present environmental hazardous waste and factory legislation and rules ranges from the local body to the District Magistrate. At this level of Indian development, there is need to use technical persons. A more effective and comprehensive approach to the problem of hazardous substances may call for more control measures. Dharmendra S. Senghor (2007: 28 – 30)

3.3 Hazardous Waste Management in United Kingdom

The United Kingdom imported 41,000 tonnes of hazardous waste for disposal 1989, according to official estimates; the largest proportions of which came from Europe (Hutchinson, 1992: 438).

However, in the United Kingdom, the Environmental Protection Act (EPA) of 1990 outlines treatment for hazardous waste to include:

1. Reduction of wastes generation
2. Recycling and recovery
3. Incineration
4. Land disposal
5. Toxic chemicals
6. E-wastes

In Denmark, throughout the 1970s, incineration was the preferred disposal alternative, and her hazardous waste treatment incineration is the model for similar facilities in other European countries.

SELF ASSESSMENT TEST

- Analyze the efforts of Indian and UK in managing the hazardous substances.

3.4 Effects of Improper Management of Wastes

The effects of wastes on human beings is highly dependant on the nature of the waste in question (whether it is re-useable or dangerous waste) and the proximity of human beings to this waste. The dangers posed by waste that are manageable are the devastating ecological and human disasters, which such occasion. Toxic, radioactive and hazardous wastes are very detrimental to humans, animals and plant life.

NESREA (formerly FEPA) has made a graphical catalogue of 27 examples of human and animals' disasters caused by improper management of waste between 1921 and 2009. Few of these are mentioned below

- (a) Minata, Japan 1953 – 1960: Methyl mercury poisoning of people eating fish polluted and mercury. This resulted in 120 deaths; many were injured and thereby hospitalized.
- (b) Bhopal Disaster India, December 4th 1984, Accidental release of poisons methly isocyanate gas from the pesticide plant of America multinational company (Union Carbide Corporation) due to a faulty pump and negligent operational policy. This resulted in over 30,000 deaths, 200,000 injured and many with irreversible deformation.
- (c) Onne, Port Harcourt, Nigeria: Industrial influent containing a high level of Ammonia from NAFCON, a fertilizer company, was discharged into the Okrika River. This resulted in massive fish killing and socio-economic problems for the fishing industries in the surrounding villages. Over N30m compensation was claimed.
- (d) Outbreak of ammonia toxic from poisonous lead in Gusau Zamfara state, Nigeria, 2010: This poisonous lead killed about four hundred people within one week and more than one people around the area were hospitalized.

To this extent, proper management of hazardous wastes offers humans, animals and plants ecological, security and health.

3.5 Recommendations to Management of Hazardous Wastes

The main issue that can be deduced from this unit is that there is no problem with sufficient laws and rules for managing hazardous waste but the major key issue is the implementation and enforcement of the laws and rules.

The National Environmental Standard and Regulations Enforcement Agency (NESREA) should intensify efforts through public enlightenment programmes, educate the public on the adequate and result oriented management of wastes particularly chemical and domestic wastes.

The main problems facing hazardous waste management and likely solution in Nigeria are discussed below:

One of the key causes of the various environmental problems is “Man”. Man no doubt depends on his natural environment for his needs of food, shelter, clothing, all these activities of man has in no small measure resulted in environmental disaster. With this, man is the measure of all things (Plato). As a result of man activities viz his environment must be therefore properly regulated and regularize as not to over exploit his surroundings for unborn generation.

The non-compliance by the industries of the NESREA industrial hazardous wastes stipulations made nonsense of the environmental policies.

To solve this identified problem; the reasons why the industries are not complying must be identified and made the industries complying. All the activities of man must be put in proper check. This action will protect and preserve the environment which tends to affect land, air, water and different kind of wastes would be reduced to the barest minimum.

People from various endeavors in life are the cause of various environmental problems; to forestall all these problems, people from all works of life must be educated and enlightened on the dangers of mismanagement of our hazardous wastes from both domestic and industrial usage.

Every home, private organizations and government department in the three tiers should be encouraged to adopt waste management and adopt regulation mechanism that fit into their various methods of waste control.

To this extent, competition that will lead to improvement in the waste administration should be encouraged. Privatization should be adopted, so that many private enterprises would be attracted into the business of waste disposal, waste utilization and its management for the sustainability of human environment.

4.0 Conclusion

The various Environmental Acts and Regulations imposes duty on every person and organization responsible for the handling of hazardous substances to comply with the prescribed procedural safeguards. Every person carrying or handling any hazardous substance shall be bound to render all assistance to the person(s) empowered by the three tiers of government for carrying out the statutory functions. Therefore, every body must be environmental cleaner's compliance to pave way for a healthy living environment.

5.0 Summary

This topic has thoroughly dealt with hazardous waste management in Nigeria, India and United Kingdom. The effect of mismanagement of hazardous wastes was equally elucidated. Finally, basic problems and likely solutions to the management of hazardous wastes or substances were identified.

6.0 Tutor Marked Assignment (T.M.A)

- i. Distinguish between Hazardous Wastes Management in the various jurisdictions you have learnt.
- ii. Identify the basic problems hindering wastes management in your country and recommend short term solutions to combat the menace of hazardous wastes management
- iii. Highlight the effects of mismanagement of waste in any Third World Country.

7.0 References and Further Readings

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- vi. Dharmendra S. Senghor (2007) Environmental Law New Delhi, Prentice-Hall of India Private Ltd. p 18 – 22
- vii. Lawrence Atsegbua *et. al.*, (2004) Environmental Law in Nigeria, Theory and Practice, Lagos, Ababa Press Ltd.
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UNIT 7
WATER POLLUTION AND CONTROL LAWS: WATER QUALITIES
MANAGEMENT

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Water Pollution and Control Law
 - 3.2 Water Qualities Management
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

Man, according to Akinade O. (1988: 12) is two-third water (in composition) and the surface of the globe is seven-tenths of water. This is beside ‘air’, the most important single element (resource) in use in all living ecology, FEPA (1991) in its guideline put it rightly that “it is common place knowledge that apart from air, water is the most essential requirement for all living beings and breathing things”. Air and water are indeed the sin important for existence for any living organism (Lawrence Atsegbua *et al.*, 2010). Of all the natural resources in the universe, water is perhaps the most unique. It is present in fixed amount, which circulates from the land to the oceans to the atmosphere and back again (Dharmendra S. Senghor; 2007: 34)

Dharmendra S. Senghor emphasized further that until recently, the pollution of natural water was not much of a problem, but with rapid urbanization and industrialization, this problem is reaching alarming proportions. Water pollution may be termed as “the undesirable adverse in composition of water to such an extent that it becomes unsuitable for the purpose for which it would be suitable in the natural state”. In another words, undesirable changes in the characteristics of waste is water pollution. Water pollution is

thus the poor quality of water which adversely affects the use of water for agricultural, domestic, industrial and other uses (Ola C.S. p. 55). These changes may be physical, chemical and biological ones (Dharmendra S. Senghor)

The quality of water from rivers, spring or stream is downgraded or polluted by organic substances from those who use the water for bathing, agricultural purposes, washing of bicycles, washing of clothes, e.t.c.

Water pollution is considered not only in terms of public health but also in terms of conservation, aesthetics and the preservation of natural beauty and resources. The most disturbing feature of the mode of disposal of waste water is that those who cause water pollution are seldom the people who suffer from it.

However, the problem now is not the quality of this particular natural resource, but the quality of the resource available to meet the demand of man for water for specific uses. There is no doubt about abundant water and its resources but inadequate, improved and safe water (Okorodudu Fubara 1998: 585 – 6). She admitted that ill-advised and often times, improper use by man and industrial production process – transmitting human feaces, detergents, plant nutrients eroded sediments pesticides, industrial affluent, have largely contributed to the pollution of the nation's rivers, lakes, streams and sea. The question is, how can government, individual and international organizations ensure adequate safe water?

2.0 Objectives

At the end of this unit the students and readers would be able to:

- Know briefly water pollution and its effect on man
- Know the efforts of Nigeria government and international organization in ensure safe quality of water for man's consumption (both for domestic and industrial uses)
- Know the legal control and anti-pollution rules put in place till date

3.0 Main Contents

3.1.1 Water Pollution

Apart from its menace to health, polluted water reduces the water resources of the nation. Particularly Africa, with the ever-increasing complexity of her socio-economic activities and rapid development, unlike the limited use to which our forefathers put water

usage and limited power of its exploitation, modern man all over the world uses of water are intensive, highly complex and no doubt very extensive (FEPA 1991)

The magnitude of the problem of water pollution caused by industrial affluent and its growing dimensions call for putting necessary curbs and checks so as to regulate the polluting industries. These factors including the accompanying pollution, if left unchecked will lead to the degradation and eventual diminution or exhaustion of the world water resources, resulting in desertification, famine and diseases and decimation of both man and animals.

Historically, in pre-industrial society, the incidents of water pollution were few in number and that too of lesser magnitude. As a result, an action under common law could take adequate care of the problem. From the advent of industries and its continuous growth and the growing water pollution that attends it call for statutory control and stricter regulatory measures focused on checking the hazards of pollution.

With this need at this material time, the Nigerian government has entered a number of treaties and put in place pieces of natural legislation and state legislation to prevent water pollution. The legal framework controlling water pollution extends to cover both common law actions and the statutory rules. Many aspects of public nuisance are covered by the statutory provisions, the common law of nuisance (which is the universal applicable law on Nuisance in all Commonwealth nations) continue to apply to matters which remain outside the domain of statute. This proposition is to identify as a matter of urgency some prominent remedial measures existing in the legal system of nations which possess the efficacy or potential of being applied and rejuvenate as effective legal tools to check the menace of hazardous water pollution.

3.1.2 Legal Control of Water Pollution

Ipsa facto, the Nigerian government has entered a number of treaties and put in place pieces of national legislation and state legislation to prevent water pollution. The Federal Government of Nigeria in 1993 promulgated the Water Resources Act No 101 (and amended in 1995 and 2009) acting under the enabling power conferred upon it by the 1999 Constitution of Federal Republic of Nigeria and as amended in 2010 particularly Part 1, 2nd Schedule paragraph 62 of Constitution of Federal Republic of Nigeria.

The major objective of promulgating this Act by the government is to vest in the Central or Federal Authority (an autonomous body) the rights to use and control certain categories of water sources in all cases where they effect more than one state of the Federal Republic. These major objectives of the Act are as stated below:

- (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.

Under this Act, the Minister of Water Resources is charged with the responsibility of ensuring that proper and adequate provision is made for the environment through the supply of water for the damage drainage, the safe disposal of sewage, effluent and waterborne waste, and the control and prevention (S5 (b)), flooding, erosion and damage to the water shed areas (S5 (e)), and also the protection of inland fisheries, flora and fauna (S5 (c)).

Further attention of the Nigerian Federal Government against pollution of water was the promulgation of the Rivers Basin Development Authorities Act, 1976 (as amended) with S2 (1) of Act specifying the function of each River Basin Authority is:

“the control of pollution in rivers and lakes in the Authority's area in accordance with nationality laid down standards”

The River Basin Development Authority objectives are as stated below:

“The preservation and enhancement of their respective areas of operation, by, for instance undertaking comprehensive development of both surface and subterranean water resources for multipurpose use ... undertaking schemes for the control of floods and erosion and for sheds management and similar conservation activities” (S2(1) River Basin Development Authority).

S 2 of the Chad Basin Authority Act of 1973 empowers the Authority to regulate the navigation and fishing of Lake Chad.

S2 of the Sokoto-River Basin Development Authority Act of 1973 empowers the Authority to ensure “the exploitation of underground water resources including the sinking of wells and bore holes for human and livestock consumption”, whereas the Sea Fisheries Act of 1971 provides that, no person shall operate or navigate any motor fishing boat within the territorial waters of Nigeria without a licence. The Act forbids the catching or destruction of any fish within the territorial waters of Nigeria by the use of any poisonous matter or by the use of explosive substance (where a fine of ₦200 or 6 months imprisonment or both is imposed for contraventions)

S 1(1) of the Territorial Waters (Amendment) Act 1971 No 38 of 1971 states:

The Territorial Waters of Nigeria shall for all purposes extend to 30 nautical miles of the coast of Nigeria (measured from low water marking or of the seaward limits of inland water.

S1 of Oil in Navigable Waters Act of 1968 forbids the ship from discharging any mixture containing not less than 100 parts of oil into Nigeria Sea. In support of this Act is S245 of the Nigerian Criminal Code (NCC) which provides:

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

The Oil in Navigable Waters Act No 34 of 1968 (S2 (1)) River Basin Development Authorities) treats:

- (a) Discharge of oil into prohibited sea area
- (b) Discharge of oil into Nigerian Waters
- (c) Failure to install oil pollution equipment on ships
- (d) Failure to keep records of oil matters
- (e) Failure by harbor authorities to provide oil reception facilities
- (f) Failure to report presence of oil in harbour water

Sections 1, 3, 5 and 6 provide penalties for offenders who are guilty of an offence under these sections of this Act. In accordance with the Act, on conviction by a High Court or a superior court on Summary conviction by any court of superior jurisdiction will be liable to fines (See S6 of the Oil in Navigable Water Act Cap 337, LFN 1999 and as amended in 2004 Prosecution under the Act has to be initiated with approval of the Attorney General of the Federation, while offences created by it are subject to concurrent jurisdiction of Magistrate Courts (S 56 (4) of the Act)

The NESREA Act prohibits the discharge in such harmful quantities of any hazardous substance into the waters of Nigeria or adjoining shore lives except as allowed, permitted or authorized by the law in force in Nigeria (Section 27 of NESREA Act). The Act empowered the “agency shall make recommendations to the President, Commander-in-Chief of the Armed Forces for the purpose of establishing water quality standard for the inter-state waters of Nigeria to protect the public health or welfare and enhance the quality of water to serve the purpose of this Act”. These Acts shows the efforts of government to control water hazardous pollution from endangering human health.

3.1.3 Water Pollution Laws and Water Quality Standards

Section 7 of the NESREA provides that the Agency shall establish “water quality standards for the inter-state waters of Nigeria”; and that the standards shall be such as “to protect the public health or welfare and enhance the quality of water to serve the purposes of the Decree”. The Act specifically stipulates that: “In establishing such standards, the Agency shall take into consideration the use and value for public water supplies, propagation of fish and wildlife, recreational purposes, agricultural, industrial and other legitimate uses”.

This statutory provision is directly relevant to the strategy proposed for implementation of the national goal on water resources management based on the “provision of water in adequate quality and acceptable quality to meet domestic, industrial, agricultural and recreational needs” (paragraph 3 (3) (a) of National Environmental Policy 1988, as amended 1992, 1995, 2004 and 2009) and “the conservation and improvement of water quality conditions and ecological systems of the water bodies”. (Paragraph 3(3) (a) of National Environmental Policy 1988 as amended).

Under proposed National Water Quality Standards, FEPA (now NESREA, 2007) has responded positively to what it calls an “onerous task” presented by its statutory duty in accordance with S 15 “by reviewing water quality standards/guidelines from developed and developing countries, such as Canada, US, Australia, India, Tanzania, Brazil, World Health Organization (WHO), International Standards, e.t.c. and comparing them with data available on Nigeria’ water quality. The harmonization of the two sets of data is used to generate the Interim National Water Quality Guidelines and Standards “(Proposed National Water Quality Standards, (NWQS) 1991)

3.1.4 Nigerian States Water Pollution Existing Legislations

All the states in Nigeria have the Water Work Act dealing with water pollution. This Act provides for a water authority that should manage and supervise the water work and state the powers of Water Authorities. The Law also discharges the excessive consumption of water and the wastage of water (See S14 and 15 of Lagos State Water Works Law, Cap 138, Law of Lagos.) Nearly all these Act prohibits pollution of water. There is provision against persons who bath, wash and throw or cause an animal or material to enter the water, works are liable for an offence. In addition to Water Works Act, most state has Water Management Board Law and all the statues deals with water pollution

a. Edo State

Water pollution is treated as part of Public Health Matter under S3 of the Edo state Environmental Sanitation Edict (See S9 of the Edo State Environmental Sanitation Edict). This Edict imposes a penalty of ₦500.00 or one month imprisonment or both for polluting any stream or river. Such fine and imprisonment or any contravention of S3 of the Edict is too small for the offence of water pollution, which affects human life.

b. Lagos State

Lagos State Environmental Pollution Control Edict, 1989 Section 19 prohibits indiscriminate digging of wells and bore holes for industrial purposes without the written approval of the Ministry of Environment and the Lagos Water Corporation

c. Abia State

Abia State Environmental Protection Agency Edict of 1994 provides for a water quality effluents limitation standard. The Agency is mandated to set an interim goal to make all state of water safe for marine resources, wild life and human life and all rural and urban towns are required to use secondary sewage treatment for all affluent.

Generally speaking, the earliest form of water pollution law can be found in our Criminal Code of 1916. This code criminalized water pollution. The code was first enacted in 1916 and section 245 provides as follows:

“Any person who fouls the water of any spring, stream, well tank or reservoir, seas to make it less fit for the purposes for which it is ordinarily used is guilty of misdemeanor and is liable to an imprisonment of six months”.

A year after the Criminal Code was enacted, there came the Public Health Act, 1917 which states in S 13(1) that:

“Whenever by act or default causes or suffers to be brought or to flow into any well, stream, tank, reservoir, aqueduct or pond used or intended for supplying water to man or beast or into any conduit communicating these with any deleterious substances or does any act whereby such water is or may be fouled shall be liable to a fine of ten pounds (twenty naira equivalent then) for everyday during which the offence is committed after conviction”.

The Public Health Act in this regards is more expansive in scope and stringent in the penalties stipulated in violation of its provisions.

3.2 Water Quality Resources International Treaties or Agreement Entered Into by Nigerian Concerning Water Pollution

The whole world is within one environment. Different national boundaries which have demarcated the world into distinct nations are anthropogenic. Nigeria is party to a number of international treaties pertinent to the protection of the water resources. Between 1960 and 1975 six of these treaties came into force in Nigeria; another six between 1976 and 1985 and till date.

- (i) International Convention for the Protection of Pollution of Sea by Oil, 1954 (as amended in 1962, 1969, 1985, 1995, 2004) London
- (ii) Convention on the continental shelf, 1958 (Geneva)
- (iii) Convention on the High Seas, 1958 (Geneva)
- (iv) Convention on Fishing Conservation of the Living Resources of the High Seas 1958 (Geneva)
- (v) Treaty Banning Nuclear Weapon Test in the Atmosphere, in outer space and Under Water 1963 (Moscow)
- (vi) Act Regarding Negotiation and Economic Cooperation Between the States of the Niger Basin, 1963 (Niamey)
- (vii) Agreement concerning the River Niger Commission and the Navigation and Transport on the River Niger 1964 (Niamey)
- (viii) Convention and Statute Relating to the Development of Chad Basin 1964 (as amended 1972) Fort-Larry, N'djamena: Yaoundé Cameroon
- (ix) International Convention on Civil Liability for oil pollution damage, 1969 to 1964 (Brussels; London)
- (x) International Convention on the Establishment of International Fund for Compensation for Oil Pollution Damage, 1971 to 1984 (Brussels; London).
- (xi) Convention on the Prevention of Marine Pollution by dumping of Wastes and other Matter, 1972 to 1978 (Lauder, Mexico City; Washington D.C; London)
- (xii) Convention Creating the Niger Basin Authority and Protocol Relating to the Development Fund of the Niger Basin 1980 (Faranah)
- (xiii) Convention for cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, 1991 (Abidjan)
- (xiv) Protocol concerning co-operation in combating pollution in cases of emergency, 1981 (Abidjan)
- (xv) United Nations Convention on the Law of Sea 1982 (Montego Bay)

Most of these agreements, treaties, conventions and protocol entered into by the government of Nigeria is to maintain and control through these means all incident of

pollution and wastes into the sea by dumping and to encourage regional and international agreements supplementary to various conventions.

3.3 Recommendations

Pollution ab initio is a nuisance that posed big treat to the international community; human, animal and entire environment. This has led to regional, bilateral and the world conventions particularly on “Kyoto Protocol” in order find lasting solution to the depletion of ozone layer and to protect it.

With all these protection activities, can be concluded that preventions is better than cure and to a large extent, it is better to protect our environment that witness the devastating effect on the environment through pollution.

However, in line with Professor Atsegbua’s conclusion, that the only solution to environmental problems lies not only with our legal rules but also in other social sciences, particularly economics’. To buttress his point, the United State of America have for long been applying ‘economic reasoning’ as formulae to legal problems (See particularly *United States vs. Carroll Towing Co; 159 F 2d 169* (2nd Cir) 1947 per the Judgment of Judge Learned Hand at p. 173)

It must be said here that, this fact must be recognised, if law is to make or have any future impact in solving the myriad of environmental problems that confronts us on daily basis (Atsegbua, et al 2010).

4.0 Conclusion

Man owes the environment where he finds himself a duty to regularly protect it from various pollutions and pollutants elements particular pollution caused by the activities of man. All these protection need to be pursued collectively and severally by the whole nations of the world. Efforts must continue to be intensified by nations, regional organizations and international organizations through meetings to regulate and regularizes the menace of pollution through legal and economic control.

5.0 Summary

Water pollution and control laws to realize water quality management, is the main heading of this unit. It also covers some areas such as water pollution and legal control,

within the federation of Nigeria, regional and ex-regional contributions through conventions, agreements, protocols and treaties. The units discuss Water Quality Standards. All these control mechanisms has contributed in no small measure to the reduction in water pollution.

6.0 Tutor Marked Assignment

- i. Identify the effort made by the states in Nigeria to combat the menace of water pollution in their various states.
- ii. Highlights conventions, treaties, protocols and agreements entered into by the Federal Government of Nigeria in respect of reduction of the menace of water pollution
- iii. State the new control mechanism to assist law in realizing its future efforts in pollution control.

7.0 References and Further readings

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UNIT 8

THE ECONOMIC APPROACH TO POLLUTION CONTROL

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 The Economic Approach to Pollution Control (Historical Background)
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

It is generally observed that administrative agencies like FEPA, SEPA and now NESREA can effectively manage the ever increasing problems of oil pollution. This assumption was debunked by a Canadian Environmental expert that “Regulatory agencies generally have displayed a number of disturbing tendencies (gross incompetency and devoid of ideas to move their countries forward in this regards). They may become entangled in the bureaucratic web created by the particular system of administration. An accord may be reached and maintained through agency officials moving to the industry side, they may fail to strongly enforce their legislation, perhaps on the basis of policy directives from their Minister, but more likely simply through inertia and fear of generating heat” (Atsegbua, et al 2010).

It was reported in 1997 that FEPA and its corollary at state level (SEPA) did not even have the facilities to carry out tests on the hazardous fuel into the country at certain time and incessant of oil spillages into the waters of the Delta Region. A concrete effort has to be channeled towards application of alternative result oriented and effective mechanism to combat the menace of environmental pollution.

Objectives

At the end of this unit, the students and the readers of this piece would be able to know;

- the effectiveness of adoption of economic approach to solving emerging hazardous pollution problems
- the effectiveness of the approach in other jurisdictions

2.0 Major Contents

2.1 The Economic Approach to Pollution Control (Historical Background)

It is no more news that the existing legislation could not adequately cater for individuals rights who suffer the adverse effects of oil pollution. In many instances, the individual is not compensated for his/her rights and interests which may be affected by oil pollution. The traditional approach of dealing with this issue has equally not measure up to expectation (i.e. governmental rules, regulations, tort law remedies and statutes on the issue of failure of common law test remedies, the experts says: The Common Law with its substantive limits apparently tied to the resolution of narrow conflict between individuals, and the capricious incidence of litigations has seem to the environmentally sensitive lawyers to be essentially impotent as the source of a viable response”.

The torts of negligence, nuisance and the rule in *Ryland vs. Fletcher* (1868) LR 3H L 330, has not been of much aid to the victims of oil pollution. Government intervention by way of legislation and regulation has also had limited success. In respect of these shortcomings it has been advocates that an alternative approach be put in place; Economics Approach or analysis of the menace of oil pollution of the enact would provide a better perspective for dealing with the problem of oil pollution. (Atsegbua, et al 2010).

The Atsegbua *et al.*, (2010: 128) posited that, among the inter-disciplines that have spring up around the law in this country, the economic approach, although of recent origin, occupies a prominent place.

To this extent, the economic analysis of law adopts a theoretical and functional approach. The economic approach theorists distinguishes allocative efficiency from distributional matters. They are concerned with allocative efficiency from distributive issues. Allocation of efficiency is the allocative of economic goods by a competitive market

forces. This would lead to a “*pareto optimal*” allocation or “equilibrium”. This explanation is regarded as “neo-classical model” which means that under assumptions, reliance on competitive markets will lead to optimal for society (Braithwaite, 1982: 481)

Hirsch W. Z. (1988) posited that, companies in unprincipled pursuit of profits can do great social harm. The environment suffers at the hands of companies which put production ahead of environmental protection.

Professor Coase, in his famous research study, where the problem of externality is reciprocal in nature and emphasized that:

“The traditional approach has tended to obscure the nature of the choice that has to be made. The question is commonly thought of as one in which A inflicts harm on B and what has to be decided is how should we restrain A? But this is wrong. We are dealing with a problem of a reciprocal nature. To avoid the harm on B, will inflict harm on A. The real question that has to be decided is: Should A be allowed to harm B or should B be allowed to harm A? The problem is to avoid the more serious harm.

To buttress his point, Coase examined the case of *Sturges v Bridgman* (1879) 11 Ch. D. 862 where the court held that the Medical Doctor has the right to prevent the confectioner from using machinery. But of course, it would have been possible to modify the arrangements envisaged in the legal ruling by means of a bargain between the two parties. The doctor would have been willing to waive his right and allow the machinery to continue in operation if the confectioner would have paid him a sum of money which was greater than the loss of income which he would suffer from having to move to a more costly or less convenient location...

The confectioner would have been willing to do this if the amount he would have to pay the medical doctor was less than the full income he would suffer if he had to change his mode of operation at this location ... See similar reasoning applied by Professor Coase in the case of *Bryant vs. Lefever* (1979) 4 C.P.O 172

Without prevarication, Professor Coase’s work which can be regarded as “classical paper” laid the basis foundation of much economics of law analysis and its importance in given us a new insight into pollution control cannot be over emphasized. The remarkable

assumption of the economic analysis of law is that, if transaction between the affected parties are costless, allocative efficiency will be reached without government intervention.

However, in the universal world of economics, transaction costs are usually defined to include those costs incurred in communicating with other parties, negotiations leading to a bargain, e.t.c.

It is important to note that:

- with heavy transaction costs, initial assignment of liability would become relevant
- the market would, most likely correct any error in the initial assignment of liability.

Despite these problems, the Coase's economics theory provides a basic fundamental analysis for dealing with the problem of pollution, if the parties are controllable in size or number.

In a "perfectly competitive market" negotiation between the parties would lead to a "*pareto optimal*" allocation of resources (Atsegbua 2010: 128 – 129)

Cheuna in his own contribution, he emphasized that in so far all externality situations do not involve the same degree of uncertainty; different internalization mechanisms would be socially most applicable in different externality situations. As a result, the following valuable suggestions were made among several alternatives

- i. Imposition of tax on the externally creating activities. The tax levied should equal in proportion to the damage caused by its pollution
- ii. Regulatory mechanisms through the promulgation and enforcement of environmental regulations. This must be backed up by civil or criminal penalties
- iii. Government induced publicly negotiated settlements among all affected parties involved can be organized by the government agent or by the affected person by the externality creating activity.

4.0 Conclusion

At the end of this unit, students must have learnt about the Economic analysis or approach to pollution control. It is interesting to study Professor Coase theory as it may solve the pollution quagmire.

5.0 Summary

Pollution is very much on the increase in Nigeria particularly around the Niger Delta region. The issue must be critically looked into by the government (at all levels), individuals and non-governmental institutions.

6.0 Tutor Marked Assignments

- i. Discuss the Coase theory as a mechanism for curbing pollution
- ii. Highlight the importance of the two cases mentioned in this unit

7.0 References and Further Readings

- i. Atsegbua supra
- ii. Dharmendra supra
- iii. Ola C. S. supra
- iv. Coase, R. "The problem of Social Cost" (1960) 3 Journal of Law and Economics, 1.

MODULE 4

PUBLIC HEALTH AND ENVIRONMENTAL PROTECTION

- Unit 1:** Public Health and Environmental Issues I
- Unit 2:** Public Health and Environmental Issues II
- Unit 3:** Factory legislation
- Unit 4:** Public Health and Hazardous Waste
- Unit 5:** Highlights of the Environmental Protection Laws in Nigeria and International Treaties, Conventional and Instruments

UNIT 1

PUBLIC HEALTH AND ENVIRONMENTAL ISSUES

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Public Health and Environmental Issues
 - 3.2 What is Public Health?
 - 3.3 Health and Environmental Law in Nigeria.
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

Those who believe that human beings have prescriptive rights would put living in reasonably healthy conditions and having access to adequate health care on the list of those rights. Reality is far from the ideal. Health is a state of total physical, mental and social well-being and not merely the absence of disease or infirmity extracted from the World Health Organisation (WHO)'s Constitution.

The issue in this regards is principally the state of medicare, sanitation, access to clean, good water, highly qualitative and affordable health services and other conditions related to health in the hotter parts of the world which are far below a level imaginable by most researchers and international health facilitators and experts.

Hence, the need to provide the healthcare facilities to poor nations and equally to provide health hazard prevention mechanisms particularly in the diseases prone area of the world by the international bodies (both non-governmental organization inclusive, various countries and other stakeholders).

2.0 Objectives

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

- the relationship between public health and environmental protection
- explain why it is essential for all the stakeholders in the world to protect human health
- identify the problems facing the public health and likely solutions

3.0 Main Contents

3.1 Public Health and Environmental Issues

Health, fundamentally is believed to be wealth, as such, the health of people within these countries is an international concern. Generally speaking, a healthy populace is the soul of a country's resources and vital to economic growth because healthy people are regarded as economically production and because unhealthy people often consume more of a society's resources than they produce. This is problem of majority of third world country (TWC).

3.1.1 What is Public Health?

This simply means organised efforts of the community to protect its members against deceases. In this wise, good health practices ensures that the water we drink is treated, milk is pasteurized, meats and other food products are inspected to eliminate contamination by pathogenic organism such as *Tuberculosis bavius*, *Salmonella typhii*, *vibrocholerae* and *shigella* (Amokaye G. O. supra 339). The need to protect the people led to enactment of various Public Health Acts in England. These Act include 1848, 1872, 1875 public health legislation enacted by Parliament in United Kingdom to deal with squanter and diseases and to establish a code of sanitary law. It is worth noting that the first Act, 1848, established a central board of health which comprised of three members who were responsible to Parliament to impose local boards of health in districts where the health rate was above the national average and made provision for other local boards of health to be established by petition (The Hutchison Encyclopedia 1992: 854)

SELF ASSESSMENT TEST

- Define public health law?
- Why public health and environmental law?

3.2 Public Health and Environmental Protection in Nigeria

The main problem affecting public health have been the prime indices in environmental protection concerns in Nigeria in the immediate colonial and post-colonial regimes (Atsegbua *et al supra*: 112 – 13). During the colonial era, the main health focus of the administration were personal hygiene and sanitation, food and drink, dealing in deceases, fouling of water bodies, burials in residential houses and the use of white phosphorus (See S243 to 248 of the Nigerian Criminal Code, Cap 77 Laws of the Federation of Nigeria (LFN), 1990 (as amended in 2004) actually sanctions these acts that were perceived primarily as dangerous to public health. It is unfortunate that the present profile of our code of criminal law and its procedure has not changed in any material way since it came into force vide the colonial Ordinance No 15 of 1916. The public health was totally restricted to the more basic and simplistic questions.

The position during the imperial regime has been described by erudite legal luminary and former Judge of International Court of Justice (ICJ in Hague, Switzerland) Prince Judge Bola Ajibola that:

“Throughout the pre independence era, there was no discernible national policy towards the preservation and protection of the environment ... there was little or no legislative activity during this period. Even then the little activity there was, concentrated on the criminalization of pollution...”

However, issues of public health and environmental protection have taken an urgent dimension after the civil war and discovery of crude oil in commercial quantity in the Niger Delta Region. Much attention has ever since been paid to the upstream and downstream sectors of the oil industry which had in turn increased tremendously the problem of public health environmental degradation arising from industrial effluents and gas flaring and emission, increase in carbon monoxide from automobile, toxic and hazardous waste management with their attendant health dangers.

In the present dispensation, questions of public health, public safety and a clean and healthy environment are very essential fundamentals. This was posited by Hon. Justice S. M. A. Belgore in his contribution to “The Need for Environmental Protection Law in Nigeria”.

The main issue in environmental protection and public health is the maintenance of social, economic, political and ecological balance and focus must be directed on the survival of man, but the efforts must also be geared towards the survival of his environment or ecosystem. Therefore, in this Module and its units emphasis shall be laid on environmental regulation with particular reference public health, industrial standards problems waste and occupational safety.

The public health determined the status of health of individual which is a direct function of the status of his/her environment. In this issue, all efforts and all hands must be on deck to ensure that all citizens within their environment live a healthy and well sanitized health.

SELF ASSESSMENT TEST

- Trace the history of public health environmental law in Nigeria.

4.0 Conclusion

In this unit, public health was introduced to the students covering the area of public health law in Nigeria and a brief introduction of health law in United Kingdom. Further discussion continues in Unit 2

5.0 Summary

The importance of public health and environmental protection was discussed in this unit; particularly the epileptic and simplistic attention paid to public health and environmental protection law in Nigeria and the up to date role of the government after independence till date.

6.0 Tutor Marked Assignment (TMA)

Introduce public health and environmental protection law in your country to a friend of yours in another country.

7.0 References and Further Readings

- 1) Amokaye G. O. (supra); p 339 - 40
- 2) Atsegbua et al (supra) p. 113 – 14
- 3) Jeremy Stranks (1998) Health and Safety Law, Bolton, Financial Times, Prentice Hall p. 1.

- 4) Charles Pearson and Anthony Pryor (1951) Environment, North and South, U.S.A. John Wiley & Sons Inc.

UNIT 2

PUBLIC HEALTH AND ENVIRONMENTAL ISSUES II

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 Connotation of public health
 - 3.2 Public health and environmental and standard enforcement
 - 3.3 Public health and environmental matters
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignments
- 7.0 References

1.0 Introduction

Public health is the domain of environmental law to protect and sustain for humans and other organisms habitation in their environment. This is to fulfill the general dictum that, the health status of any human being is no doubt direct function of the status of his environment. Therefore special attention needs to be paid to this core area of human life and other organism. It is legally mandatory to give priority to the sustainability of the environmental concerns for both the present and generation unborn to enjoy clean and healthy environment.

2.0 Objectives

The basic objectives of this unit are to imbibe the students and interested readers:

- the meaning of public health
- the relationship between environmental protection and public health

3.0 Main Contents

3.1 Connotation of Public Health

Public health according to the Black's Law (Dictionary 9th Edition) means prevailing healthful or sanitary condition of the general body of people or the community and the absence of any general or widespread disease or cause of mortality". It concluded

by adding the wholesome sanitary condition of the community at large. While, public health department or other agency responsible for making the public health; federal law dealing with health are administered by the Department of Health and Human Services. Whereas, public health services, that is the cabined offices and units of the Health and Human Services responsible for promoting the physical and mental health of citizen in their various environment where they find themselves. On the other hand health law is a statute, ordinance, or code that prescribes sanitary standards and regulation for the purpose of promoting and preserving the community's health.

3.2 Public Health and Environmental Standards Enforcement

All over the world, questions affecting public health had played an important role in the determination of legislative regulations. For instance in 2004, the WHO report on World Health and population, states that, it was clearly stated that nearly 70 – 80% of the world's population does not have an access to any health/sanitation facilities and more than 50% do not have access to health care. The preclude to this was in 1981, when WHO, pledged to provide determinants of good health that is, adequate, nutrition, sanitation, safe drinking water and habitable environment.

The scope of these legislative actions remains a question of some doubt particularly in the 3rd world nations of Asia and Africa. We look to Nigeria as one of this third world countries being tormented by the menace of environmental hazards. This quagmire had been the fate of Nigeria as far back as 1916; when the Criminal Code Law was promulgated and the public health provisions were inserted therein. For the purpose of this academic study, the relevant provision of the Criminal Code of 1916 related to public health and environmental standards enforcement are highlighted below for ease references. These provisions in question covers sections S243 – 248 of the Code.

S 243; (i) Any person who sells, as food or drink, or has in his possession with intent to sell it as food or drink, any article which has been rendered or has become noxious, or is in a state unfit for food or drink, knowing or having reason to believe the same is noxious as food or drink, or is in a state unfit for food or drink is guilty of a misdemeanors, and is liable to imprisonment for one year.

(ii). Any person who adulterates any article of food or drink, so as to make such article noxious as food or drink, intending to sell such article as food or drink, or knowing it to be likely that the same will be sold as food or drink, is guilty of a misdemeanor, and is liable imprisonment for one year.

S 244; Any person who

(i) knowingly takes into a slaughter-house used for the slaughter of any animal intended for the food of man the whole or any part of the carcass of any animal which has died of any disease; or

(ii) knowingly sells the whole or part of the carcass of any animal which has died of any disease, or which was diseased when slaughtered; is guilty of a misdemeanor, and is liable to imprisonment for two years.

S 245; any person who corrupts or fouls the water of any spring stream, well, tank, reservoir, or place, so as to render it less fit for the purpose for which it is ordinarily used, guilty of a misdemeanor, and is liable to imprisonment for six months.

S 246; any person who without the consent of the President or the Governor buries or attempts to bury any corpse in any house, building, premises, yard, garden, compound, or within a hundred yards of any dwelling-house, or in any open space situated within a township, is guilty of a misdemeanor, and is liable to imprisonment for six months.

S 247; Any person who

(a) vitiate 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 a public way; or

(b) does any act which is; and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous of life, whether human or animal; is guilty of a misdemeanor, and is liable to imprisonment for six months.

S 248; Any person who

(a) sells or has in his possession for the purposes of sale any matches made with white (yellow) phosphorus or

(b) uses white (yellow) phosphorus in the manufacture of matches; in guilty of an offence and liable to a fine of Twenty Naira, and any matches in respect of which the offence shall have been committed shall be forfeited.

These provisions were testimony to how critical and sensitivity of Nigeria subsequent administration to the problem of environmental concerns of public health. This and statute is evidence of the inefficacy of the Criminal Code to attend to the pressing environmental needs of ever challenging Nigeria environment as a result of industrialization, oil pollution and ever increasing uncontrollable population. Though efforts has been on top gear since 1988 Koko toxic waste incidence, such legislative actions as the enactment of the Harmful Waste (Special Criminal Provisions) Act, Cap 165, LFN, 1990 (as amended in 2004), the Federal Environmental Protection Agency Act, cap 131, LFN, 1990 (as amended in 2004), the Environmental Impact Assessment (EIA) Act 1992, were evidence of government seriousness. There are other several legislative regulations reducing industrial effluents and Factories Act Cap 126 LFN 1990 (as amended 2004) to protect and maintain environmental concerns of public health.

3.3 Public Health and Environmental Matters

Environmental matters are related to public health concerns and primarily raise fundamental questions of the survival of man in his own world. Environment is an inevitable concomitant to public health. The impact of environment is therefore remarkable and inseparable. At present, there is the need to maintain a healthy environment at home, at work place and at the neighbourhood. This has acquired a new urgency requiring a standard measures and control mechanisms (Kalu V. (2000: 166).

However the 1992 UNEP report shows that the state of medical care, sanitation and other conditions related to health in some areas of the world is below an acceptable level. This was supported by WHO Commission on Health and the Environment where it was disclosed that 4 million children under age 0 – 5 die every years totaling 4 million, from diarrhea disease, cause by contaminated foods and water.

The fate of children is one way to think about health care. In LDCs, children under age five die at a rate that is 16 times higher than for children in Europe. When compared to children in EDCs, those in LDCs are mere frequently exposed to diseases because of poor

sanitation and other factors. They are more vulnerable to diseases because of malnutrition and they more often succumb to disease because basic medical care is not available, where one is available, they do not have access to it in terms of affordability. With this fact, an estimate of 70% of the children under age five in LDCs who die each year perish from infectious and parasite diseases that are under normal condition easily preventable and claim only 1% of the children in EDCs “where no famine, no flood, no earthquake, no war has ever claimed the lives of this many children a year”, the director of UNICEF pointed out.

Adults are not exempted from the menace of health hazards, poor health conditions and lack of adequate care within their reach in the society. Most of births in EDCs are attended by skilled health experts, only 40% or less of the birth in LDCs are. For instance, AIDS is a key factor in the economic struggles of sub-Saharan Africa. It attacks the workforce, overwhelms the meager budgets of countries, creates millions of orphans, and diverts outside funding that could be used for development. In 2005 for example, in Zambia, 40% of the teachers who left that country’s already-too-small corps of educators did so as a result of the fact that they had AIDS and could no longer work. According to the World Bank “The epidemic continues to reverse life expectancy gains, erode productivity, decimate the workforce, consume savings and dilute poverty reduction efforts”.

It is further revealed in these reports that one billion urban and city dwellers are exposed regularly to levels of air pollution that exceed WHO standards for safety and good health. It is unfortunate that millions of people are presently suffering from various diseases skin cancer, cataract, river related blindness and damage to the body’s immune systems caused by depletion of the ozone layer and global warming with a potential to trigger new epidemics.

There are some identified ‘secondary and tertiary’ problems that related to developmental concerns leading to environmental degradations in the nature of:-

- i. Demographic and population problems
- ii. Poverty in various land
- iii. Resources application and pattern of consumption
- iv. Food crops production and agricultural factors and it usage

- v. Water quality and water communicable diseases such as typhoid fever, guinea worm infections, river blindness e.t.c
- vi. Solid waste management and industrial waste and their disposal
- vii. Transboundary pollution issues including global air pollution, marine pollution, ozone depletion, acid rain, climatic change etcetera.

Conclusively, it is therefore recommendable that the problems identified should be addressed through the National Health Policy, National Housing Policy, Agricultural Policy, Pollution Abatement, Effluent Limitation, Hazardous and Solid Wastes Management, Environmental Impact Assessment, Smoking and International Convention:. All these identified Policies need to be embodied into our domestic/municipal laws for the proper management and enhancement of adequate health programs. (Atsegbua et al supra: 118).

4.0 Conclusion

Various issues relating to public health and environmental concerns were discussed in this unit, ranging from conception of public health, public health and environmental standards enforcement of public health and environmental matters. Most of the suggestions earmarked in this unit if properly implemented, will better the lots of the people and their environment.

5.0 Summary

Most of the problems hindering the health of people within their environment were discussed and the solutions to the problems were equally identified by the writer. It is unfortunate that millions of people in the third world countries are prone to diseases as a result of human activities. Some of these activities that result to injury are oil pollution cause as a result of exploration of oil, noise pollution generated by industries, air pollution by smoke produced by vehicular engine e.t.c. All these need to be reduced to the bearest minimum through government policies and programme to reduce health hazards.

6.0 Tutor Marked Assignment

- i. Define public health?
- ii. Evaluate the relationship between public health and environmental law.
- iii. Identify the problem hindering peoples health in your environment and
- iv. Suggest likely solution.

7.0 References

1. Baljeet S. Kapoor (2001), Environmental Sanitation, New Delhi, S. Chand & company Ltd p 48; 191.
2. Amokaye G.O (Supra); p 373
3. Atsegbua et al (supra); pp 114 - 118

UNIT 3

FACTORY LEGISLATION

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 The Factory Act
 - 3.2 Public Health and The Work
 - 3.3 Occupational Health and Safety at Work
 - 3.4 Applicable statutes to health and safety.
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References & Further Readings

1.0 Introduction

The Factory Act is very important. It was enacted as a result of inefficiencies and failure of the Common Law to adequately protect and address the problem of safety. The current law on public health in the workplace in Nigeria is governed by the provisions of the Factories Act Cap 126, LFN, 1990. Other laws include; the National Environmental Protection (Effluent Limitation) Regulations, 1991, the National Environmental Protection (Pollution Abatement in Industrial and Facilities Generating Waste) Regulations, 1991; National Environmental Protection (Management of Solid and Hazardous Wastes) Regulations, 1991. The laws are necessary because the risk index of workers in their work place cannot be over-emphasised.

2.0 Objectives

The objectives of this unit are:

- i. To let the students know the meaning of Factories Act
- ii. The impact of public health and the work environment concerns.

3.0 Main Contents

3.1 The Factory Act

Why the enactments of Factories Act? The need for a Factories Act became imperative because of the ineffectiveness common law on the subject and its failure to properly address some peculiar questions of industrial safety. The limitations in the application of the common law related to laws such as occupier's liability, negligence and nuisance. The serious questions of environmental safety and health made the government realize the urgent need for legislative action. The reason for new legislation to cover the areas where common law is incapacitated is explained as:

“Prior to the intervention of legislation, this field was regulated by the common law rules relating to contract and torts. Thus, a workman could not claim rights, benefits or protection over and above what was agreed upon between him and his employer as at the time of entering into the contractual obligation. But given the very weak negotiating position of the employee, he could not among other things, negotiate seriously, for a safe and/or healthful work and work environment”.

3.1.1 Factories Act in Nigeria

The Act defined factory to mean, any premises in which or within the close of cartilage or precincts of which ten or more persons are employed in manual labour in any process for or incidental to any of the following purpose namely:

- (a) The making of any article or part of any article; or
- (b) The altering, repairing, ornamenting, finishing, clearing, or washing or the breaking up or demolition of any article;
- (c) The adapting for sale of any article, being premises in which or within the close of cartilage or precincts of which the work is carried on by way of trade or for purpose of gain and to or over which the employer of the persons employed therein has the rights of access or control.

Professor Atsegbua noted with nostalgia thus; “the difficulty emanating from the above definition is that it makes the Factories Act applicable only to closure or premises exclusively devoted to the above uses.

3.1.2 Factory Act Generally

A statute that regulates workers' hours, health, and safety. A Federal law, enacted in 1938 that regulates minimum wages, overtime pay, and the employment of miners. In Britain, an Act of parliament such as the Health and Safety at Work Act 1974, which governs conditions of work, hours of labour, safety, and sanitary provision in factories and workshops. In the 19th century, legislation was progressively introduced to regulate conditions of work, hour of labour, safety, and sanitary provisions in factories and workshops. In present dispensation, all employees are now covered by the Health and Safety at work Act, which is enforced by the health and Safety Executives.

3.1.3 Key Provisions of the Nigerian Model of Factories Act

The Factories Act was made in such a way that the scope of the Act can be expanded or a separate legislation designed to accommodate matters of public health and workers' safety.

Part V contains well detailed provision regulating protective clothing, removal of dust and the protection of the eyes in certain process. The Factories Act stipulates.

Section 45 (1) – 49 (4).

45. (1) In every factory in which, in connection with any process carried on there is given off any dust or fume or other impurity of such a character and to such extent as to be likely to be injurious or offensive to the persons employed, or any substantial quantity of dust of any kind, all practicable measures shall be taken to protect the persons employed against inhalation of the dust or fume or other impurity and to prevent its accumulating in any workroom, and in particular, where the nature of the process makes it practicable, exhaust appliances shall be provided and maintained, as near as possible to the point of origin of the dust or fume or other impurity as to prevent it from polluting the air of any workroom.

(2) No stationary internal combustion engine shall be used unless provision is made for conducting the exhaust gases from the engine into the open air.

46. Where in any room any poisonous or otherwise injurious substance is so used as to give rise to any dust, or fume, no person shall be permitted to partake of food or drink in that room.
47. Where in any factory workers are employed in any process involving excessive exposure to wet or to injurious or offensive substance, suitable protective clothing and appliances, including, where necessary, suitable gloves, footwear, goggles and head covering, shall be provided and maintained for the use of such workers.
48. (1) In the case of any of the processes specified in the Fourth Schedule to this Act, suitable goggles or effective screens shall be provided to protect the eyes of the persons employed in the process.
- (2) Where in any factory electric arc welding is carried on effective provisions shall be made, by screening or otherwise, to prevent persons employed (other than persons employed in the welding process) from being exposed to the electric arc flash.
49. (1) Where the Minister is satisfied that:
- a) owing to the conditions and circumstances of employment or of the nature of the processes carried on in a factory, provision requires to be made for securing the health, safety and welfare of persons employed or any class of them; or
 - b) any manufacture, machinery, plant, equipment or process used in factories is of such nature as to cause risk of bodily injury or be offensive to persons employed or any class of them.

He may, subject to the provisions of this Act and the *Labour Act*, make such regulations as appear to him to be reasonably practicable and to meet the necessity of the case.

2) Regulations so made may apply to all such factories or to any specified class or description of such factories, and may provide for the exemption of any specified class or description of factory either absolutely or subject to conditions.

3) Regulations so made may without prejudice to the generality of the powers conferred in subsection (I) of this section -

a) Prohibit the employment of or modify or limit the hours of employment of, all persons or any class of persons in connection with any manufacture, machinery, plant, equipment, appliance, process or description of manual labour: or

b) Prohibit, limit or control the use of any material or process; or

c) Modify or extend with respect to any class or description of factory any provisions of Parts II, III, IV or this Part of this Act, being provisions imposing requirements as to health, safety or welfare; or

d) make provision for -

(i) arrangements, for preparing or heating and taking meals,

(ii) ambulance and first-aid arrangements,

(iii) rest rooms,

(iv) the supply and use of seats in workrooms,

(v) the supply of protective clothing, and

(vi) arrangements for the supervision of persons employed, and may impose duties on owners, employed persons and other persons, as well as on occupiers.

4) The Minister may make regulations in connection with the fees to be paid in respect of any matter or thing done under this Act.

S71 which provides a fine of ₦5,000.00 or two years imprisonment when such as contravention involves death. The fine is just too meagre and highly inconsiderable when it relates to human life. Though, the Act vested in the magistrate court the jurisdiction to try all offences. The sanction regime in particular is inappropriate.

3.2 Public Health and the Work Environment

Formerly the common law was the main law on public health in many Commonwealth Nations. The public health in the workplace is primarily governed by the provisions of the Factories Act (See Introductory Part of this Unit (1.0) for other related laws).

The bordering question is, why low level of reports of industrial disasters or catastrophes in Nigeria against workers? Is it due to ineffectiveness of the legislation or due largely to non-reporting on the part of the victims (workers concern).

The safety of industrial workers in the last 15 years has received a lot boost in respect of legislative action. But the only basic problem is that of setting up a legal framework for occupational safety standards. In recent times, some developing nations across the globe have witnessed one industrial disaster or the other such as the Minimata, Japan mercury poisoning, the Bhopal, Indian Union Carbide factory explosion in 1984, oil pollution in the Niger Delta region in Nigeria till date, Chernobyl nuclear plant explosion in Russia, 1986 and the recent nuclear plant disaster in Japan in 2011.

On the health of workers and the risk indices in their various places of work are remarkable. This fact was supported by an environmental scholar: “workers are at risk and their health threatened or impaired in some cases due to occupational exposure to toxic and hazardous pollution some of which can cause cancer, high abortion, rates, birth defects, deafness and death.”

In the light of occurrence of the danger of work place; which constitute environmental risks, to what extent is the adequacy of the protection mechanisms from the health hazard. The laws relating to public health safety law and environmental protection need to be reviewed to meet the challenges of modern day is industrial world and globalization.

3.3 Occupational Health and Safety at Work

The occupational health and safety at work involved provisions of adequate attention, standard and safeguards for protecting the health and safety of workers in the way the work process is organized, designed and managed, to prevents occurrences of accidents, dangers/catastrophes and diseases which are the resultant of exposure to ergonomic hazards.

With the above facts, there are four categories, namely physical, chemical, biological and mechanical. That is,

- i. **Physical Hazards:** include the heat, dust, electric current, falling objects, bad industrial house keeping and obstruction
- ii. **Biological Hazards:** could arise from viruses and bacteria, toxic material like carcinogens and inflammable substances, for example, hydrocarbons and spirits.
- iii. **Mechanical Hazards:** refers to accidents arising from the use of machines, automobiles or mechanically propelled machinery such as conveyer belts.
- iv. **Chemical Hazards:** refers to all aspect chemical materials that when touch with naked hand it become injurious to the worker e.g. fertilizers, weeding chemicals and various insecticides are not suitable to human health, application of chemical to blast rocks and stone which loud noise can result into deafness.

3.4.0 Applicable Statutes To Health and Safety

- 3.4.1** The major applicable statutes for the protection, manufacturing and enforcement of occupational health and safety work standards is the Factories Act, Cap 126, Laws of the Federation of Nigeria, 1990. The Act is enforced by the Factories Department of the Federal Ministry of Labour and Productivity
- 3.4.2** Other sources are statute law which consists of Acts of Parliament such as the Health and Safety at Work Act 1974 (HSWA). Another aspect is Statutory Instruments, which are known as ‘subordinate legislation’, or, delegated legislation.
- 3.4.3** Common Law; this is an area of law that has developed since the eleventh century and is based on the decision of the courts where precedents are established. Therefore, common law is the body of law that is universally, or commonly applied as a result of the judgments of the courts.
- 3.4.4** Judicial precedent is another source of health safety law. Judicial precedent is defined as “a decision of a court to which authority is attached. Precedents not only influence the development of law but are in themselves, one of the material sources of the law. There are two major division of precedents;
A precedent may be authoritative or persuasive

3.4.4.1 Authoritative precedents are the decisions which judges are bound to follow. A lower court is bound by a previous decision of a higher court and court of record.

3.4.4.2 Persuasive precedents are decisions which are not binding on a court, but to which a judge will attach some importance. For instance, decisions given by the superior courts in Commonwealth countries will be treated with respect in the English High Court.

3.4.5.1 Criminal and Civil Law: A crime is an offence against the state. A person commits a crime when he breaches the criminal law. The burden of proving a criminal charge is beyond reasonable doubt and rests with the prosecution.

3.4.5.2 A civil action on the other hand, generally involves individuals. In such actions, a plaintiff sues a defendant for a remedy or remedies that is beneficial to the plaintiff. Most of civil cases attract damages, as a term of compensation.

4.0 Conclusion

This unit discussed the Factories Act, public health and the work environment, occupational health and safety at work and the applicable statutes to health and safety to all industrial workers. Health and environment are intertwined therefore, there is need to protect the workers within the industries environment.

5.0 Summary

This unit is very important to this course Environmental Law II. The Factories Act has been defined in line with enacted Acts in the other parts of the world, particularly, Britain, common law, judicial precedents, criminal and civil laws, to curb different categories of hazards. The compensation against the committer of health and safety offences usually attracts punishment, remedies and compensation in favour of workers.

6.0 Tutor Marked Assignment

- i. Define Factories Act
- ii. Appraise the applicable status of health and safety law in your country
- iii. Write full note on the following
 - a. Public health and the work environment
 - b. Occupational health and safety at work.

7.0 References

1. Amokaye G.O (supra) p. 375 – 6
2. Atsegbua et al (supra) p. 119 – 25.
3. The Hutchison Encyclopedia, New 10th edition, India, Helican Publishing 1992 p. 379
4. The Black Law Dictionary 9th Edition p. 675

UNIT 4

PUBLIC HEALTH AND HAZARDOUS WASTE

- 1.0 Introduction
- 2.0 Objectives
- 3.0 Main Contents
 - 3.1 What are toxic wastes?
 - 3.2 Public Health and Toxic Waste
 - 3.3 Impact of Waste on Public Health
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

It is the activity of industrial and manufacturing processes that create solid and hazardous wastes. Hazardous wastes come in shapes and sizes as a result of various operations and processes related to manufacturing. In this unit, we are concerned with the control of hazardous wastes and other chemical dumping which endangers human health and environment. The disposal of hazardous waste was never seen as an important public health and environmental issue particularly in Africa until the public outcry that greeted the dumping of toxic wastes at the Koko Port in 1988 (in Former Bendel State now Delta state, Nigeria)

2.0 Objectives

The objectives focus of this unit is to

- Imbibe the students with hazardous toxic/waste is?
- Public health and environment: The impacts of irrational dumping of toxic wastes in the territories of 3rd world countries.

3.0 Main Contents

3.1 What are Hazardous/Toxic Wastes?

Hazardous wastes are wastes that are corrosive, flammable, chemically reactive or toxic and radioactive. However, waste is considered to be hazardous if it is injurious, poisonous, toxic or noxious including radioactive substances and may expose any person to the risk of death, fatal injury or incurable impairment of physical and mental health See. Harmful Waste (Special Criminal Provisions... Act S15 (as amended in 2004) where the word “Toxic” means “poisonous”. A poison is an agent that chemically destroys life or health upon contracts with or absorption by an organism. It is harmful to human life and engenders the environment. Wastes are these things or substances which originally useful to man and his environment but are at certain material time not useful or serving any purpose again. These things or substances include things left over as excess materials or by-products and no more needed or required for the work at hand.

Hutchinson defines Hazardous substances as waste substance, usually generated by industry, which represents a hazard to the environment or to people living or working nearby. Examples include radioactive wastes, acidic resins, arsenic residues, residual hardening salts, lead, mercury, nonferrous, organic solvents and pesticides. Their economic disposal or recycling is the subject of research. For instance, the United Kingdom imported 41,000 tones of hazardous waste or disposal 1989, according to official estimate, the largest proportion of which came from Europe.

3.2 Public Health and Toxic Waste

Health is a state of complete physical, mental and social well-being and not merely the absence of decease or infirmity. It is not only about lack of illness, but fundamentally about access to clean waste, proper sanitation and high quality affordable health services. Human Rights activists and scholars in support of right to health have invoked the alienable right to life.

Public health refers to the organized efforts of the community to protect its members against diseases. As a result, good public health practices ensures that the water we drink is treated, milk is pasteurized, meat and other food products are inspected to eliminate contamination by pathogenic organism such as *Tuberculosis bacillus*, *Salmonella typhii*,

vibro cholera and shingellar and dwelling places are regularly inspected to ensure proper ventilation and prevents infestation by disease causing pests and vermin. Drugs uses are expected to be regulated by government agencies and children immunized against childhood diseases of whopping cough, diphtheria, tetanus, measles, polio and tuberculosis at early stage of their lives.

The dumping of hazardous – toxic and radioactive waste materials on the waters and upland of African continent which marked the sudden realization of the dangers posed by the uncontrollable industrialization going on in the continent and outside Africa.

Before the pollution of African, contact with toxic wastes was from the economically advanced nations of Europe. The African continent and part of South American countries remained environmentally clean and unpolluted. It was the Koko toxic waste dumped in 1988 that led to the realization by the Nigerian government that the issue of environmental rights and health go beyond monthly sanitation observation and domestic waste management.

The 1989 international Convention on the trans-boundary movement of hazardous wastes held in Basel adopted the American model for the classification of waste. “Waste streams” are wastes from hospitals and clinics; wastes from wood preserving chemicals wastes from heavy metals that is, metal dusts, ignitable wastes and heavy metal solutions, mercury lead and asbestos are also inclusive.

Bassel Convention defined Toxic as any substance that has poisonous effects if breathed in, eaten or absorbed by the skin including carcinogens. On the other hand, S15 of the Harmful Waste Act provision defines Harmful Waste to mean any injurious poisonous and includes, nuclear wastes emitting any radio-active substance or the waste is such quality....as to subject any person to the risk of death, fatal injury or incurable impairment of physical and mental health.

SELF ASSESSMENT TEST

- Define Hazardous Wastes

3.3 Impact of Waste on Public Health

The abandonment and neglect of uncollected wastes, poor handling, ineptitude and inadequate disposal safeguards for any kind of waste have no doubt, serious impact on public health.

Among the effects of the hazardous toxic waste are outbreak of epidemic, unhealthy environment; there includes the social reinforcement of poor hygiene habit and practices all of which contribute in no small measure to a vicious cycle.

The regular and indiscriminate dumping and discharge of chemical in public drains watercourses, gorge and road have also been reported to be responsible for the increasing contamination of water sources. The dumping of hazardous waste and human excreta into the urban waste stream and has been found to be very injurious to the people.

3.3.2 Water related Diseases

- i. The pathogenic organisms are transmittable from one person to another through their domestic water supply.
- ii. Water – washed diseases whose transmission is reduced when the supply of water is more readily available. These diseases include diarrheal diseases, and infections of the skin and eyes which are reduced when the supply of waste is adequate for personal cleanliness.
- iii. Water based diseases transmitted by organism which live in water. That is schistosome worms develop in aquatic snails and the guinea worm parasites develop in minute crustaceans which otherwise live in wells and other bodies of water. These parasites may affect people from the water uses either through drinking, in case of guinea worm or by finding their ways through the skin as it applicable to schistosomiasis.
- iv. Insect vectors diseases which relates in some way to water. For instance, mosquitoes have larvae are breed in stagnant water, gutter ponds and filthy environment, causing diseases such as malarial and yellow fever.

Various rules and regulations have been developed to curb the menace of effects of the toxic wastes in Africa and by domestic governments.

4.0 Conclusion

The issues discussed in this unit include definitions of Toxic, wastes and hazardous elements; public health and toxic wastes and the impact of waste on the environment.

5.0 Summary

Hazardous waste is defined as very injurious to life, both human and other organisms within the environment. The impact of the wastes on environment is equally elucidated for the student to have proper grasp of the subject matter.

6.0 Tutor Marked Assignment

1. Differentiate between hazardous wastes, wastes and toxic?
2. Vividly discuss the impact of wastes of public health and environment
3. Briefly discuss the measures put in place either by your domestic government or international bodies or foreign government to curb this menace.

7.0 References

1. Amokaye G.O. (supra) 308; 339; 353.
2. Atsegbua et al (supra) 126 – 127
3. The Hutchinson Encyclopedia (1992) 10th edition; India, Helicon publisher p. 483.

UNIT 5

HIGHLIGHTS OF THE ENVIRONMENTAL PROTECTION LAWS IN NIGERIA AND INTERNATIONAL TREATIES, CONVENTIONS AND INSTRUMENTS

- 1.0 Introduction
- 2.0 Objective
- 3.0 Main Contents
 - 3.1 Highlights of the Environmental Protection Laws in Nigeria
 - 3.2 Highlight of International Laws, Treaties, Conventions and Instruments on Environmental Protection
- 4.0 Conclusion
- 5.0 Summary
- 6.0 Tutor Marked Assignment
- 7.0 References and Further Readings

1.0 Introduction

It is pertinent to note that pollutes the environment and creates disequilibrium, hence the need to put him check, in order to curb or prevent him from degradation of the environment. This can be done through an objective and effective enforcement of environmental protection laws, treaties, conventions and instruments. However, various environmental laws and legislation have become universal instruments for the management of the environment and natural resources. In this wise, the main ways and means of preventing destruction of the environment and reversing pollution menace lies on the enactment of an actionable enforcing policies and programme, backed by appropriate rules/legislations and treaties at all levels (of administration in the entire world).

2.0 Objectives

The objective of this unit is to let the students and interested readers to know:

- (i) The law, treaties, conventions and instruments specially made by municipal government, international governments and international organisations directed towards making the environment clean and habitable.
- (ii) The importance of this legal instruments that cut across all aspects of environmental issues and various pollutions as its affect the environment.
- (iii) Statutes both from domestic and international
- (iv) All these efforts are geared towards ensuring sustainable environment

3.0 Main Contents

3.1 Highlights of the Environmental Protection Laws in Nigeria

Laws and regulations are very important tools to combat the hazards of industrial pollution. To avoid destruction of environment, the regular renewal and making of new laws, treaties and conventions is vital towards achieving a sustainable environment.

Before the dumping of toxic waste all over the African continent by the Europeans, most African states relied on the Environmental Ordinance (legislation) inherited from the colonial era. These rules were predominantly made for political and economic interest of the colonial lords. A learned writer stated, “Laws which would have in any way restricted economic activities or imposed additional responsibilities on them (colonial administration) by way of environmental requirement would probably have been considered counter-productive, if not repugnant, this resulting in a situation where there was hardly any laws deliberately directed at protecting the environment of the natives from the polluting effects of their activities”.

The existing relevant legislations in Nigeria till date are as follows

- (1) The River Basins Development Authorities Act 1976 (No 25f 15 June; 1976);
- (2) The Chad Basin Development Authorities Act, 1973 (Act No 32 of 14 August, 1973)

- (3) 1999 Constitution of the Federal Republic of Nigeria (as amended in 2011)
- (4) The Sokoto-Rima Basin Development Authority Act 1973 (Act No 33 of 14 August, 1973);
- (5) The Sea Fisheries Act, 1971 (Act No 30 of 10 June, 1971);
- (6) The Oil in Navigable Waters Act of 1968 (Act No 34 of 22 April, 1968)
- (7) The Nigeria Criminal Code, Cap 42 (which deal specifically with fouling of water) 1958;
- (8) The Petroleum Act 1990 which deals with prevention of pollution of water courses and the Regulation under this Act contained in the petroleum (Drilling and Production) Regulations, 1969.
- (9) Births, Deaths and Burials Act, 1958 (Cap 23 Laws of the Federation of Nigeria);
- (10) Noxious Acts, 1958 (Cap 42, Law of Federation of Nigeria)
- (11) Public Health Act, 1958
- (12) The Lagos Public Health Bye Laws 1958 (Cap 165 Laws of the Federation particularly at page 2002)
- (13) The Criminal Code Act, 1958 (Cap 42, Laws of the Federation of Nigeria) particularly S246 which deals with matches with phosphorus.
- (14) Harmful Waste (Special Criminal Provisions Act Cap 165, Law of Federation of Nigeria, 1990)
- (15) The Nigerian Environmental Impact Assessment Act (E 1A) 1992
- (16) Management of Solid and Hazardous Waste Regulations Act 1991
- (17) The National Guidelines and Standard for Environment Pollution Control in Nigeria 1991 pursuant to section 16(1) of FEPA Act (now Federal Ministry of Environmental (FME) 1999.
- (18) National Environmental Protection (Pollution Abatement in Industries and Facilities Generating Wastes) Regulations, 1991.
- (19) National Environmental Health Practice Regulations 2007 (No 21, vol. 942)
- (20) National Environmental (Sanitation and Wastes Control Regulations 2009 (No 60, vol. 96)
- (21) Fundamental Rights (Enforcement Procedure) Rules 2009 (No 74. Vol. 96)

- (22) Environmental (Wetlands, River Banks and Lake Shores) Regulations 2009 (No 58, vol. 96)
- (23) National Environmental Standard and Regulations Enforcement Agency NESREA (2007)
- (24) Pollution Abatement in Industries and Facilities Generating Wastes, Regulations S 1 (9)
- (25) National Environmental Noise, Standards and Control) Regulations, 2009 No 67, vol. 96.

These are some of the major national environmental laws enacted to protect, maintain and sustain hygienic, healthy and clean environment.

3.2 Highlights of the International Law, Treaties, Conventions and Instruments to Protect the Environment.

The issue of environmental protection has moved from domestic or domestic affairs of some states and now a universal matter which call for the attention of all and sundry in such a way that Nigerians can live in a healthy, clean and habitable environment.

International organizations and other stakeholders have contributed in no small measures to the sustainability of our environment. Some of these international laws, conventions and treaties are hereby highlighted viz:

1869 Convention Establishing Uniform Regulation Concerning Fishing in the Rhine between Constance and Basle, 9 December 1869; IX *I.P.E* 4695: 355)

1900 Convention Destinee a Assurer la Conservation des Diverses Especies Animates Vivant s l'Etat Sauvage en Afrique qui sont Utiles a l'Homme ou Inoffensive (London). Convention for the Protection of Wild animals, Birds and Fish in Africa, London, 19 May 1900, IV *I.P.E* 1607"

1902 Convention for the Protection of Birds Useful to Agriculture; Paris, 19 March 1902, in force 20th April 1908, I.E.L.M.T 902, 22. Convention for the Protection of Human Rights on the Freedoms, Rome

1911 Convention between United States of America, the United Kingdom of Great Britain and Northern Ireland, and Russia for the Preservation and Protection of Fur Seals, Washington 1911, in force 15 December 1911, in British and foreign State Papers Vol. 102 p 969

1933 Convention Relative to the Preservation of Fauna and Flora in their Natural State; (London) 8 November 1933, in force, 14 January 1936,172 LNTS 241.

1949 Agreement for the Establishment of General Fisheries Council for the Mediterranean, Rome, 24 September 1949, in Force 20 February 1959

1950 International Convention for the Protection of Birds, Paris, 18 October 1950, in force 17 January 1963, 693 UNTS 185

1951 Convention for the Establishment of the European and Mediterranean Plant Protection Organisation, Rome, 18 April 1951, in force 1 November 1953, UKTS 44 (1956)

1951 FAO International Plant Protection Convention, Rome, 6 December 1951, in force 3 April, 1952, 150 UKTS 67

1954 International Convention for the Prevention of Pollution of the Sea by Oil; London, 12 May 1954 in force 26 July 1958, 327 UNTS 3 (1954 Oil Pollution Convention)
Phyto Sanitary Convention for Africa South of the Sahara, London, 29 July 1954, in force 2 July 1956, 247 UNTS 400

1959 Agreement Concerning Co-operation in the Quarantine of Plants and their Protection Against Pests and Diseases, Sofia, 14 December 1959, in force 19 October 1960, 1 *SM.T.E.* 153

1940 Convention on Nature Protection and Wild life Protection Western Hemisphere; Washington, 12th October 1940; in force, 1st May 1942, 161 UNTS, 193

1946 International Convention for the Regulation of Whaling Washington, 2 December 1946, in force 10 November 1948, 161 UNTS 72 Washington Antarctic Treaty
Washington, 11 December 1959, in force 23 June

1960 ILO Ionising Radiations Convention

1961 Convention on the Protection of Lake Constance Against pollution, Stockholm
Convention Concerning the Protection of Waters of Lake Geneva Against Pollution, Paris, 196

1967 Treaty on Principles Governing the Activities of States in the Exploration & Use of Outer Space including the Moon & other Celestial Bodies, London, Moscow & Washington DC

1962 Protocol Concerning the Constitution of an International Commission for the Protection of the Rhine Against Pollution, Paris, 940 UNTS 211

1976 Convention on the Game-hunting Formalities Applicable to Tourists Entering Countries in the Conseil Del'Entete, Yomossoukro

1978 International Convention on Standards of Training, Certification and Watch-keeping for Seafarers (STWC)

1963 Agreement on the International Commission for the Protection of the Rhine Against Pollution; Berne, 29 April, 1963 in force 1st May 1965 994 UNTS 3, amended by Convention for the Protection of the Rhine Against Chemical Pollution, Bonn 3 December, 1976

Convention on African Migratory Locusts; Kano, 23 May 1963, entered into force 13 April 1963

Acts Regarding Navigation and Economic Co-operation Between the States of the River Niger, Niamey, 26 October 1963, in force 1st February 1966; 587 UNTS

1964 Agreement Concerning the Niger River Commission and the Navigation and Transport on the River Niger; Niamey, 25th November 1964 in force 12 April, 1966, 587 UNTS 21

Convention and Statute Relating to the Development of the Chad Basin, 22 May 1964, 964 I.E.L.M (amended in 1972 & 1978, 973 IEL 80)

1966 Helsinki Rules on the Use of the Waters of International Rivers 20th August 1966, 52 I.L.M 482 (1967)

The Civil and Political Rights Covenant and the Economic & Social Rights Covenants; 16 December 1966, in force March 23 1976, 6 I.L.M (1967)

International Convention on Load Lines, London, 5 April 1966, in force 21 July 1968; 604 UNTS 133

1967 Phyto-Sanitary Convention for Africa; Kinshasa, on 13th September 1967

1968 African Convention on the Conservation of Nature and Natural Resources, Algiers, 15 September 1968, in force 9 October 1969; 1001 UNTS 4

1969 International Convention Relating to Intervention on the High Sea, November 29, Brussels, 29 November 1969, in force 6 May 1975; 9 I.L.M. (1970)

Convention on the Law of Treaties, Vienna, 1969, in force 27 January 1980

International Health Regulation, 1969.

Protocol to the African Charter on Human & People's Rights on the Establishment of an African Court on Human & People's Rights, June 9, 1998

1971 Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, Brussels, 18 December 1971, in force 16th October 1978; 11 I.L.M (1972)

Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Ramsar, 2 February 1971, in force 21st December 1975

ILO Benzene Convention

1972 Convention Concerning the Status of the Senegal River and Convention establishing the Senegal River Development Organisation; Nouakchott 11 March 1972, in force 1974 amended on 17/12/75 I.E.L.M. 19 & 20.

Convention on the Protection of the World Cultural and Natural Resources; Paris, 16 November 1972, in force 17 December 1975_ 1037 UNTS 151

International Convention on the Prevention of Marine Pollution from Dumping of waste and other Matters; 29th December 1972, in force 30th August 1975 UNTS 120

Convention on the International Regulations for Preventing Collisions at sea
London, 20 October 1972, in force 15 July 1977 UNTS 77 (1977)

London Convention for the Conservation of Atlantic Seals

OAU Charter

1958 Geneva Convention on the High Sea

1969 International Convention on Civil Liability for Oil polluting Damages

1973 Convention Establishing a Permanente Inter-State Drought Control
Committee for the Sahel; Ouagadougou 12 September 1973.

Convention on International Trades on Endangered Species of Wild Fauna and
Flora; Washington; 3 March 1973 in force 1 July 1975 93 UNTS 234

International Convention for the Prevention of Pollution by ships (**MARPOL 1973**)
not in force, 12 I.L.M 1319; 17 I.L.M 546

1974 International Convention for the Safety of Life at Sea 1974 London 1 November,
1974 in force 25 May 1980, UNTS 2. See Protocol of 1978 London, 17 February
1978 in force 1 May 1981, UKTS 40 (1981) Protocol, London 11 November 1988,
not in force

1976 Convention on the Protection of the Rhine Pollution by Chlorides, Bonn 3 December
1976, in force 5 July 1985; 16 I.L.M (1977) 25

Convention for the Protection of the Rhine against Chemical Pollution, Bonn, 3rd
December 1976, in force 1 February 1979; 1124 UNTS 375

IMO Merchant Shipping (Minimum Standards) Convention, 1976.

Barcelona Convention, Barcelona, 16 February 1976, in force 12 February 1978, 15
I.L.M. (1976) 290

Barcelona Dumping Protocol, 16 February, 1976, in force 12 February, 1978 15 I.L.M 1976 (300)

Barcelona Emergency Protocol, 16 February, 1976, in force 12 February 1978, 15 I.L.M. 1976 (306)

1977 ILO Occupational Hazards Conventions Agreement on the Joint Regulation of Fauna & Flora, Enugu

1978 Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ship, London, 17 February 1978, in force 2 October 1983 17 I.L.M. (1978) 246

1978 Kuwait Region Convention for Co-operation on Protection of the Marine Environment from Pollution, Kuwait, 24 April 1978, in force 1 July, 1979; 1140 UNTS 133

1978 Kuwait Protocol Concerning Co-operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency, Kuwait, 24 April 1978, in force 1 July, 1979, I.L.M (1978) 526

1979 Convention on Long Range Transboundary Air Pollution; Geneva 13th November 1979 in force before 16th March 1983 18 I.L.M (1979) 1442

Convention on Migratory Species of Wild Animals, Bonn, 23 June 1979, in force 1 November 1983; 19 I.L.M (1979) 15

Convention on the Conservation of European Wildlife and their Natural Habitat, Berne, 19 September 1979 in force 1st June 1982, UNTS No. 56 (1982)

Kuwait Protocol Concerning Marine Pollution Resulting from Exploration and Exploitation of the Continental Shelf, Kuwait, 29 March, 1979, in force 17 February 1990

1980 Convention Creating the Niger Basin Authority and Protocol Relating to the Development Fund and the Niger Basin; Faramah, Guinea, 21 November 1980, in force on 3 December 1982; I.E.L.M.T. 980

Athens Protocols for the Protection of the Mediterranean Sea Against Pollution from Land Based Sources; Athen, 17 May 1980 in force 17 June 1983, 19 I.L.M. (1980)

1981 Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region; Abidjan, 23 March 1981 in force 5 August 1984, 20 I.L.M. 1981 (746)

Protocol Concerning Cooperation in Combating Pollution in Cases of Emergency, Abidjan, 23 March 1981; in force 5 August 1984, 20 I.L.M. (756)

The African Charter on People and Human Rights; Banjul, 27 June 1981 in force 21 October, 1986; 21 I.L.M. (1982) 59

Lima Convention for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific (Lima Convention), Lima 12 November, 1981, in force 19 May 1986, I.E.L.M.T (1981) 85

Lima Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbon or other Harmful Substances in cases of Emergency, Lima 12 November 1981, in force 14 July 1986 I.E.L.M.T (1981) 85

ILO Occupational Safety Convention

1982 Geneva Protocol Concerning Mediterranean Specially Protected Areas, Geneva, 3 April, 1982, in force March, 1986 I.E.L.M.T. 982

Jeddah Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment, Jeddah 14 February 1982, in force 20 August 1985; EIPL 50 (1982) 982

1982 Jeddah Protocol Concerning Regional Co-operation in Combating Pollution and Other Harmful Substances in Cases of Emergency, Jeddah, 14 February 1982, in force, 20 August 1985, I.E.L.M.T. 982:14

Protocol on the Protection of the Black Sea Marine Environment Against Pollution from Land-Based Source (LBS) Bucharest, 21st April 1982, in force 15th January 1994

1983 FAO International Undertaking on Plant Genetic Resource (FAO Undertaking), Rome, 23 November 1983

Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena, 24 March 1983 in force 11 October 1986, 22 I.L.M. (1983)221

Cartagena Protocol Concerning Co-operation in Combating Oil Spills, Cartagena, 24 March 1983 in force 11 October 1986, 22 I.L.M. (1983) 240

Quito Supplementary Protocol to the 1981 Lima Agreement, Quito 22 July 1983, in force 20 May 1987, I.E.L.M.T 983; 55

Agreement for the cooperation & Consultation between Central African States for the conservation of Wild Fauna, Libreville, 1983

Protocol Agreement on the Conservation of Common Natural Resources, Khartoum

Quito Protocol for the Protection of the South-East Pacific Against Pollution from Land-Based Sources, Quito, 22 July 1983, in force 23 September 1986, I.E.L.M.T. 983;54

1985 Convention for the Protection of the Ozone Layer, Vienna, 22 March 1985, in force 22 September 1988; 28 I.L.M. (1987), 1529

Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region, Nairobi 21 June 1985 entered into force on 30th May, 1996; I.E.L.M.T 985

Protocol Concerning Protected Areas and Wild Fauna and Flora in die East African Region, Nairobi 21 June 1985 entered into force on 30th May, 1996; I.E.L.M.T 985

Protocol Concerning Co-operation in Combating Pollution in Cases of Emergency, Nairobi 21 June 1985 entered into force on 30th May, 1996; I.E.L.M.T 985

1985 ILO Occupational Health Services Convention

1986 Mexico-US Agreement for Co-operation in Environmental Programmes and Transboundary Problems, Washington, 12 November 1986 in force 29th January 1987 26 I.L.M (1987), 25

1986, Noumea Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea, 25 November 1986, in force 18 August 1990, 26 I.L.M. (1987) 38

1986 Noumea Protocol Concerning Co-operation in Combating Pollution Emergencies, Noumea, 25 November 1986, in force 18 August 1990; I.E.L.M.T 986:878

1986 Noumea Protocol for the Prevention of Pollution of the South Pacific Region By Dumping, Noumea, 25 November 1986, in force, 18 August 1990, IE.L.M.T. 986:87A

1986 ILO Asbestos Convention

1987 Protocol on Substances that Deplete the Ozone Layer, Montreal 16 September 1987 in force 1 January 1989; 26 I.L.M. 1529 (1987)

Southern African Development Co-ordination Conference (SADCC) Harare Agreement, 28 May 1987 27 I.L.M (1988) 1 109

1989 The Lome IV Convention, Lome, 15th December 1989 in force 1st September 1991; 29 I.L.M 783 (1990)

Basle Convention of Transboundary on Hazardous Wastes and Their Disposal, Basle, 22 March 1989, in force 24 May 1992; 28 I.L.M (1989) 57

Paipa Protocol for the Conservation and Management of the Protected Marine and Coastal Areas of the South-East Pacific, Paipa, 21 September 1989; I.E.L. 989:71

Paipa Protocol for the Protection of the South-East Pacific Against Radioactive Contamination, Paipa 21 September 1989, I.E.L. 989:70

Convention on the Rights of the Child

1990 International Convention on Oil Pollution Preparedness, Response and Cooperation, London 30 November 1990; not in force (1991) 30 I.L.M 735

Adjustment and Amendment to the 1987 Montreal Protocol, London, 29 June 1990 in force 10 August, 1992; 30 I.L.M. (1991) 537

Kuwait Protocol Concerning Pollution from Land-Based Source, Kuwait, 20 February 1990

Protocol to the Bamako Convention (not yet in force)

Kingston Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean Region, Kingston, 18* January 1990 in force 18 June 2000, 1 Yb'k I.E.C, 441; (1990)

1991 Convention on the Ban of Import into Africa and die Control of Transboundary Movement and Management of Hazardous Waste; Bamako, 29th January 1991 not yet in force 30 I.L.M (1991) 775

Convention on Environmental Impact Assessment in a Transboundary Context Espoo, 25th February 1991, not yet in force, 30 I.L.M (1991) Espoo, Convention

ILO Code of Practice on the Prevention of Major Industrial Accidents

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SELF ASSESSMENT TEST

- Justify the importance of all these conventions, treaties and agreements.

3.3 Some Important Dates in the History of Environmental Law

Late '60s and Early '70s Drought in Sub-Saharan Africa – over 200,00 people and millions of animals die

September 1973 Inter-State Permanent committee on Drought Control in Sahel (CILSS) established by 9 Sahelian countries

August – September 1977	United Nations Conference on Desertification (UNCOD) held in Nairobi, Kenya – Desertification addressed as a worldwide problem for the first time and a Plan of Action to Combat Desertification (PACD) adopted.
June 1992	United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro, Brazil – 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
June 17, 1994	United Nations Convention to Combat Desertification (UNCCD) adopted in Paris, France – June 17 becomes the world day to combat desertification
December 1996	The UNCCD enters into force, 90 days after the 50th ratification is received.
October 1997	COP 1 in Rome, Italy – Rules governing the COP and its subsidiary bodies established, the functions of the Global Mechanism set forth and the permanent secretariat designated.
January 1999	Permanent secretariat of the UNCCD established in Bonn, Germany
November 1999	COP 3 in Recife, Brazil; - First review of policies, operational modalities and activities of the Global Mechanism Consultations on the “Recife Initiative” to enhance the implementation of the obligation of the UNCCD.

December 2000	COP 4 in Bonn, Germany – Implementation annex for Central and Eastern Europe (Annex V) and the “Recife Initiative” adopted. An ad-hoc working group (AHWG) starts an in-depth review of reports on the implementation of the Convention.
March – April	Intersessional meeting of the AHWG in Bonn, Germany – A comprehensive report including conclusions and recommendations on further steps in the implementation of the Convention, is adopted and submitted to COP 5.
October 2001	COP 5 in Geneva, Switzerland – A Committee for the Review of the Implementation of the Convention (CRIC) established as subsidiary body of the COP Reform of the CST, the scientific subsidiary body of the COP, is adopted and a Group of Experts is established.
August – September 2002	World Summit on Sustainable Development (WSSD), Johannesburg, South Africa – Governments call on the Global Environments Facility (GEF) to become a financial mechanism of the UNCCD.
October 2002	Second Assembly of the GEF in Beijing, China adopts a decision to designate land degradation as its fifth focal area and to establish the GEF as a financial mechanism of the UNCCD.
November 2002	First meeting of the Group of Experts in Hamburg, Germany.

November 2002

CRIC 1 in Rome, Italy – Innovative solutions to combat desertification are identified and shared a report is adopted and will be submitted to COP 6

August – September 2003

COP 6 in Havana, Cuba – The Global Environmental Facility (GEF) designated as a financial mechanism of the Convention; CRIC 2 recommendations on ways to improve the implementation of the Convention endorsed.

May 2005

CRIC 3 in Bonn, Germany, New ways mapped to mainstream desertification.

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