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REFLECTIONS ON THE CAUSES, EFFECTS AND LEGAL MECHANISMS FOR THE CONTROL OF ENVIRONMENTAL POLLUTION IN NIGERIA

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Abstract

This article is a reflection on the causes, effects and various legal mechanisms put in place for the control of environmental pollution in Nigeria. For the purpose of legal exposition, the article will examine the types and sources of environmental pollution. In view of the consequences of environmental pollutions on both human and animals, the article outlines local legislation and specific international treaties and conventions to which Nigeria is signatory to control environmental pollution. In conclusion, this article makes suggestions aimed at guiding against environmental pollution.

1. 0. Introduction

Pollution is the introduction of any substance or energy form at a rate faster than what the environment can accommodate or beyond the carrying capacity of the natural resources or physical, biological and chemical components of the earth surface. Pollution invariably occurs when the substance introduced into the environment cause harm to the quality of human life, animals, plants and aesthetic value of the environment. The history of environmentalism dates back to the origin of man which portrays the relationship between man and his environment. In man's quest for food, shelter and clothing he has contribute to the altering of his natural environment.¹ According to

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Oludayo², the development of environmental law could be divided into three distinct periods. The first period was the pre-colonial era when traditional people through their culture and customs preserved the environment through the observances of taboos, beliefs and culture of the traditional people. During this period, various mechanisms were put in place to checkmate people from altering the environment by introducing into it any substance that may have adverse impact on people is wellbeing or clog the free flow of rivers and streams. For instance, it was a taboo to throw any refuse into the rain. Similarly, it was an offence to fell trees in the sacred or secluded forests. With various taboos and customs, the ancient people were able to preserve and conserve the environment from pollution in the same manner as the modern day legislation dictates. The second stage of environmental law development was the introduction of common and statutory laws by the colonial administrators to regulate polluting activities. This era, according to Oludayo witnessed the introduction of many regulations strictly targeted at protecting human health, forestry and other natural resources. The third period referred to the emergence of several stringent statutory environmental laws to control environmental pollutions. Section 37 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act³ defines environment to includes water, air, land and all plants and human beings or animals, living therein and the inter relationships which exist among these or any of them.

There is pollution when materials accumulate where they are not wanted though, the materials which pollute may sometimes be naturally

¹. Dimowo. "Pollution Problems and Effect". *Modern Practice Journal of Finance and Investment Law*, 2006, Vol. 6, Nos 3-4, p, 497.

². Oludayo A. G., *Environmental Law and Practice in Nigeria*, University of Lagos Press, Lagos, 2004, pp. 1-2

³. This Act was promulgated in 2007 and it repealed the Federal Environmental Protection Act of 1989 .

valuable.⁴ In the opinion of Mowoe, man, for a long time, has held the erroneous belief that the environment, made of land, air and water, can absorb waste products, however, the over-burdened natural processes cannot adjust to the heavy load of materials which man and sometimes nature add to them.⁵ The truth is that the environment is important to both man and animals, thus, it is therefore essential to protect this common heritage and make it free from any hazardous and obnoxious substances for the overall health and wellbeing of both living and non-living organisms. The objective of this paper is to reflect on causes, effects and various legal mechanisms put in place in Nigeria and few international conventions for the control of environmental pollution. The discourse will ultimately help to determine how effective or otherwise are the extant legal mechanisms for the control of environmental pollution in Nigeria.

2. 0. Preliminary Concepts in Environmental Law.

There are few conceptual terms in environmental law; few of these are discussed below:

2.1. Environmental Law.

Environmental law 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.⁶ In the view of Oludayo, environmental protection proceeded from a simple premise – a moral, ethical belief that we should protect those things we all share, the air, water, and land – environmental law is the transformation of those moral principles into legally enforceable norms.⁷ This, according to Atsegbua makes the concept of environmental law in Nigeria to be

⁴. Mowoe K. M., "Quality of Life and Environmental Pollution and Protection" in Nigeria in Omotola, J. A (ed.) *Environmental Law in Nigeria Including Compensation*, Faculty of Law, University of Lagos, 1989, p. 231

⁵. *Ibid.*

⁶. Oludayo A. G., *opcit*, at p. 3.

⁷. *Ibid.*

dynamic considering that its policy and juridical basis has moved over the years beyond the necessity for the mere control and management of environmental health hazards, to the need for the prevention of environmental pollutions generally through legal policing.⁸ The major incident in the history of Nigeria which put environmental issues in the front burner was the dumping of harmful toxic waste materials in the Port of Koko, Niger- Delta State region of Nigeria in June, 1988. This incident caused stir in the country and the aftermath of the event led to the development of various mechanisms both within Nigeria and outside the country for development of environmental law.

2.2. Environment.

The term 'environment' is inherently technical in scope and application. This, has, therefore accounted for various meanings and definitions given to the term. According to Susan Wolf, many scholars have attempted to define this term in a way which expresses the full extent of its role and purpose in environmental management. The following definitions however suffice, 'Environment' is defined to 'Consist of all or any of the following media, namely, air, water and land and the medium of air includes the air within other natural or man-made structures above or below ground'.⁹ It is the condition that affects the behaviour and development of somebody or something¹⁰ environment includes water, air, land and all plants and human beings or animals living therein and the inter-relationship which exist among those or any of them.¹¹ Oludayo defines it has including the way in which the environmental media interact with one another and the way in which

⁸. Atsegbua, Lawrence *et al.* *Environmental Law in Nigeria: Theory and Practice*. Ababa Press Limited, Lagos, 2003, p. 2.

⁹. Susan Wolf *et al.* *Principle of Environmental Law*, 3rd Edition, Cavendish, 2002, p. 3

¹⁰. A. S. Hornby, *Oxford Advanced Learner's Dictionary of Current English*, Eighth Edition, Oxford University Press, p 491.

¹¹. S. Gozie Ogbodo, "The Role of the Nigerian Judiciary in the Environmental Protection Against Oil Pollution: Is it Active Enough?" (2008) 11 (1 & 2) UBLJ, p. 252.

they interact with the man-made environment, the fauna and flora which inhabit them.¹² Environment therefore embraces everything within and around man that may have effect on or be affected by man, and these necessarily include water, air, land, animal, forest and everything within the planet earth. Thus, when pollution occurs, it threatens natural systems, human health and aesthetic sensibilities, all of which make up the quality of life.¹³

An understanding of the concept of the environment as synonymous to totality of human surrounding will go a long way in assisting man to be conscious and take concrete steps to preserve its natural state and quality in his daily pursuit of survival and developmental activities.

2.3. Pollution

The word 'pollution' has various meanings. In section 37 of National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, pollution is defined as "man-made or man alteration of chemical, physical or biological quality of the environment beyond acceptable limits and the pollutant shall be construed accordingly". Pollution involves the discharge of toxic substances and the release of heat, in such quantities or concentrations as to exceed the capacity of the environment to render them harmless.¹⁴ There is pollution when the environment is altered in composition or condition directly or indirectly as a result of activities of man so that it becomes less suitable for all or some of the uses for which it was naturally suitable¹⁵

¹². Oludayo A.G. *op cit.* p. 3.

¹³. K. M. Mowoe. *op cit.* p 231

¹⁴. This was the definition given to the word by the United Nations Conferences held at Stockholm in 1972. The Conference gave birth to the United Nations Environmental Programme (UNEP).

¹⁵. This was the definition given to the word by World Health Organisation and quoted by Dimowo. *op. cit.*
p. 498.

Pollution is any undesirable change in the natural characteristic of the environment in any state of matter.¹⁶ From the definitions above, pollution will necessarily include the introduction into the planet earth by man or nature any substance or material beyond what the earth can conveniently accommodate as to render them harmless for the use of man and other components occupying the universe. Supporting this view, Ibidapo Obe aptly observed that pollution is the introduction by man directly or indirectly of substances or energy into the environment resulting in such deleterious effects as harm to living resources, hazards to human health, hindrances to marine activities including fishing, impairment of quality for use of seawater and reduction of amenities.¹⁷ It follows therefore that unless the substances introduced into the environment have deleterious effect to living resources including human, animal, flora and fauna, there is no pollution.

3. 0. Types and Sources of Environmental Pollution

Basically, sources of environmental pollution can be looked at from the three major environmental media namely: land, air and water. However, there are many types of environmental pollution, but since, all types of environmental pollutions occur within the three aforementioned environmental media, types and sources of environmental pollution are discussed below.

3.1. Land Pollution

By land pollution, is meant the degradation of land by man through harmful activities like dumping of harmful waste materials such as chemical input that are dangerous to vegetation and agricultural production.¹⁸ The term also includes anything laid on land, which

¹⁶ Ogbodo. *op. cit.*, p. 253.

¹⁷ A. Ibidapo Obe. "Criminal Liability for Damage Caused by Oil Pollution"

in. J. A. Omotola (ed) *op. cit.*,

¹⁸ Atsegbua *et al.*, *op. cit.*, p. 76.

automatically impairs its arableness yield or cultivability such as land mines, booby traps and other similar military devices.¹⁹

The major cause of land pollution in the modern age is the development of technology through industrialisation. This leads to urbanisation, and the over concentration of the world population in particular areas of the landmass. Land pollution which could also be in form of solid waste has been defined as non-liquid, non-soluble material ranging from municipal garbage to industrial wastes that contains complex substances and sometimes hazardous substances²⁰.

There are various sources of land pollution, however, the major one include deforestation through timber exports, traditional hunting and non-wood product gathering and fuel wood. The discovery of oil in the Niger-Delta region has greatly contributed to deforestation through seismic lines through tropical rain forests, swamp forests, mangroves and farmland. Other sources are discharge of industrial waste into open gutters, drains, streams, channels and lagoon by factories and large companies. There is also soil degradation through the application of inorganic fertilizers, thus causing declining in soil fertility and population pressures.²¹

3.2. Air Pollution

Article 1 of the Convention on Long Range Trans-boundary Air Pollution²² defined air pollution as:

“The introduction by man directly or indirectly of substances or energy into the air resulting in

¹⁹. *Ibid.*

²⁰. *Ibid.*

²¹. Ojo, Godwin Uyi and Jayeoba Gaskiya (ed). *Environmental Laws of Nigeria: A Critical Review*. Environmental Rights Action/Friends of the Earth, Nigeria, 2003, pp , 20-21.

²². The Convention was concluded in Geneva on 13th November, 1979 and came into force on 16th March, 1983. The objective of the Convention is “to protect man and his environment against air pollution and to endeavour to limit and , as far as possible, gradually reduce and prevent air pollution, including long-range trans-boundary air pollution”

deleterious effect of such a nature as to endanger human health, farm, living resources and ecosystem and material property and to cause impairment to interfere with amenities and other legitimate use of the environment”

Air is a mixture of basically two complementary gases: Nitrogen and Oxygen. Air pollution is the upsetting of the natural arrangement of different gases in air. Air pollution is the accumulating of substances in the air, insufficient concentration to produce measurable effects on man, plants and animals. It involves the emission of harmful substances into the atmosphere, which will cause danger to any living thing.²³ In summary, air pollution is the presence of foreign matter either gaseous, particulate or a combination of both in the air, which is detrimental to the health and welfare of man.

These sources of air pollutions are numerous and this includes industrial fumes belching into the atmosphere or releasing carbon monoxide, hydrocarbon and dust particles. Air pollution is also caused by petroleum production *vide* continuous gas flaring, space/aero technology through aircrafts, supersonic jets, military air bombers, space shuttles, air rockets and space station. The large sources of air pollution in Nigeria are vehicle emissions through fuel combustions of diesel or petrol engines. The former emits nitrogen, while the latter emits nitrogen, carbon monoxide, sulphur dioxide and lead, waste incineration whereby domestic waste is burnt, bush burning and electrical generating plant fume both at home and in the factories.²⁴ Other sources of air pollution in Nigeria are siting of Iron and steel industries and quarries at the location that could hitherto be classified as free zone. A good example of these is the siting of quarry at Wasinmi in Osun State, similarly, two new iron and steel industries had emerged at Ile-Ife and Ikirun also in Osun State. The dust and smoke coming from these new

²³. Atsegbua *et al*, *op. cit*, p, 76

²⁴. Uyi Ojo and Gaskiya (ed), *op. cit*, pp. 21-22

locations indeed have deleterious effect on the people living around the area mentioned.

3.3. Water Pollution.

By far one of the most important human needs is Water, water is required in almost all facets of human activities,²⁵ it can provide energy, food, fibre and industrial goods and it is a means of transportation²⁶. Water is made up of hydrogen and Oxygen – a chemical association that is chemically represents as H_2O ²⁷. Water pollution occurs in oceans, lakes, rivers and streams and affects life directly through toxicity, killing most water plants and animals and causing reproductive failure in other²⁸. By section 15 of the repealed Federal Environmental Protection Agency Act, water pollution could be said to be making the quality of water poor in such a manner or degree which adversely affects the use of water for propagation of fish and wildlife, recreational purpose, agricultural or other legitimate uses.

The principal sources of water pollution are oil spills, industrial refuse and agricultural fertiliser²⁹. According to Lawrence Atsegbua, water comes in many forms such as de-oxygenating material e.g. sewage and other organic wastes like spillage, from waste and waste from a number of heavily industrial processing units e.g. food processing, textile and dairy product processing. Other sources of water pollution include the release of untreated industrial effluents and waste into water bodies, release and introduction of industrial and domestic waste into water, use of toxic or other harmful chemicals in water, such as to fish, or harvest other sea foods.³⁰ This is very common among the rural dwellers who usually pour chemicals such as Gammalin 20 or other chemicals into flowing river to kill fish and other aquatic resources.

²⁵. Ikhide Ehighehua. *Environmental Protection Law*, New Pages Law Publishing Company, Warri. 2007, p. 35.

²⁶. *Ibid.*

²⁷. Atsegbua, *op cit* .p. 17.

²⁸. *Ibid.*

²⁹. *Ibid.*

³⁰. Uyi Ojo and Gaskiya (Ed), *op. cit*, pp. 21-22

Furthermore, other sources of water pollution are construction of canals and channels which cause the infusion of salty sea water into fresh water streams. (rivers or creeks), oil spills into water from oil company facilities inside water and seepages of petroleum products and even crude oil into water bodies at loading ports, and vessels plying the waterways.³¹

3.4. Noise Pollution

Noise has simply been described as “excessive or unwanted sound”³². It is regarded as a form of vibration that may be considered through solids, liquids and gases. Noise is measured with a unit known as Decibel (in ten). According to Okediran, noise can be of varying degrees³³ namely:

- i. Low noise e.g. the humming of birds, normal human conversation and murmurs, droning of air-conditioners. This is generally regarded as an acceptable level of noise.
- ii. Moderate noise e.g. shouts cries and normal volume of singing.
- iii. High noise e.g. noise from factories, aircraft, electrical generating plants – the menace caused by this last example is aptly revealed in ‘the Punch’ by Ukpoukure as he recounts the urban dwellers experience on his first night in Lagos³⁴.

Economic growth and propensity have led to an increase in the source of noise pollution. Noise pollution seems to have been taken for granted and in fact accepted by most people in the society. This general acceptance may be due to the ignorance of the health hazards created by noise pollution³⁵.

Ignorance of the health implications of noise is probably one of the reasons for the non-challant attitude of people towards noise

³¹ *Ibid.*

³² Okediran. “Noise Pollution Control in Nigeria – Can anyone hear the Law above the Din”. Vol.11 No. 1 (1991), The LASU Law Journal. p. 55.

³³ *Ibid.*

³⁴ *Ibid.*

³⁵ Dimowo Folarin, *op cit*, p. 502.

pollution. Ignorance of health hazard arising from noise pollution has not in any way reduced in Nigeria. In Nigeria, majority of urban dwellers are exposed to noise pollution at high intensity as a result of noise from food vendors, gramophone players, garage urchins, citing of church, mosque, school and even factories within residential area.

Overall, the incidence of noise pollution has been traced broadly to two factors:

- (i). Socio-economic and cultural factors,
- (ii). Attitudinal or behavioural factors and nature of Nigerian cities structures.³⁶

3.5. Oil Pollution

Oil pollution forms part of the general malaise of environmental pollution.³⁷ The disastrous effect of oil pollution is now beyond question, but despite this consciousness of the distress caused by oil pollution, the development of advanced technology and careful precautions, it has been admitted that "accidents" seem to occur periodically in drilling for oil³⁸.

The Oil Industry as a whole and Nigerian National Petroleum Corporation in particular is the huge potential source of oil pollution.³⁹ Talking about various activities of oil sector as source of environmental pollution, Indibe Okoye, has observed that in exploration activities, noise is very pronounced; he stated further that such pollution is sourced from detonation processes, noise can also be generated from movement of heavy and light vehicles and the rattling of the drilling rig 24 hours a day. Both seismic and drilling operation in most cases may last for

³⁶. A. Y Okediran, *op cit*.

³⁷. Finine Fekumo J. "Civil Liability for Damages Caused by Oil Pollution" in Omotola J.A. (ed), p. 254.

³⁸. *Ibid*.

³⁹. Indibe Okoye, "Oil Pollution Control " in Shyllon F. (ed) the Law and Environmental in Nigeria 1989, Vantage Publishers (Int) Limited, Ibadan, p. 68.

months and sometimes years. Also expected are impacts on landscape and vegetation by the movement of vehicle and trucks.⁴⁰

Condensation problems in gas plants lead to the production of enormous amounts of condensates, disposal of which may pose some pollution problem in the environment⁴¹.

3.6. Industrial Pollution

Apart from home surroundings great danger of environmental pollution also exists in the factories⁴² where numerous processes involving use of various machines, chemicals substances, and metal, take place daily so as to produce the wide variety of goods and services that are considered indispensable to man's existence and wellbeing⁴³. These processes are on the increase as a sign of progress. Many new substances came into use regularly⁴⁴. At the end of the exercise, industrial wastes and effluents by-products of the processes are discharged, often times carelessly, into the environment through pipes, drains, air ducts and other means and they find their way into the waters used for drinking, fishing and other purposes, land on which plants and tree are grown and the air which sustains us with oxygen⁴⁵.

Industrial pollution according to Agomo is a threat to both human, animal and plant life. It affects the aesthetic quality of our environment and in the case of noise may create stress related illness. Diseases, such as cancer, kidney failure, nervous disorder, leukaemia, mental retardation, heart failure and a host of others are often not unconnected with pollution of the environment especially when pollutants are known to include, radioactive wastes, ions, and chemical, some of which are found in our homes as food additives and preservatives, pesticides,

⁴⁰. *Ibid.*

⁴¹. *Ibid.*

⁴². Agomo C.K. "Labour Legislation Regulating Industrial Pollution" in Omotola, J.A. Faculty of Law, University of Lagos, Lagos, 1990, *op. cit* p. 65.

⁴³. *Ibid.*

⁴⁴. *Ibid.*

⁴⁵. *Ibid.*

cosmetics and drugs⁴⁶. It is therefore not only oil and radioactive materials as in the Koko toxic waste case, but as has been stated a number of other substances constitute either actual or potential hazardous substances in relation to industrial pollution of the environment in general⁴⁷.

4.0. Effects of Pollution on the Environment

The impact of pollution on the environment is far-reaching as it affects the delicate balance which exists in the interaction of the various key factors at play in the environment. The increase in human population and industrial activities has increased the chances of polluting elements in the environment. The increase in population has increased the number of machine propelled vehicles boats, ships, etc. These equipments emit substances into the environment which have deleterious effect on the environment. Similarly, increased in population has greatly decreased the number of agricultural and arable farmland while dwelling houses are on the increased. Talking about the various effects of pollution on both man and animal, Folarin Dimowo observed that there is a systematic effect on the human body, which occurs when a toxic substance has been absorbed into the bloodstream and distributed throughout the body. Several parts of the body such as the blood, kidney, liver and skin are disturbed as a result of this. The effect of environmental pollution is felt through all the various types of pollutions highlighted above and they are discussed hereunder.

4.1. Effects of Land Pollution

The effects of pollution on the environment are that once the environment is polluted, the quality of the environment, air, land and water changes from its original state⁴⁸. The effects of land pollution are far-reaching in the industrial age and nature of the industrial revolution and the lack of a sustainable development model for industrial progress

⁴⁶. *Ibid.*

⁴⁷. *Ibid.*

⁴⁸. Atsegbua *op cit*, p.89

have allowed the creation of chemicals and products which may serve the idea of convenience or productivity or efficacy. This has led to long-lasting chemical which persist in the environment and are potentially toxic to life.

The effects of pollution on the land are not limited to the terrestrial ecosystem, because the synthetic chemicals are not degraded by normal processes of life. From there the pollution can travel through the roots of plants into any herbivore which consumes the plant and until it reaches the highest organisms in the food web: humans⁴⁹. Land pollution can have sustained and damaging effects to the ecosystem and the current and future utilisation of the parcel of land. Talking about land pollution, it has some of the most devastating effect on both nature and living beings⁵⁰.

Tons and tons of domestic water are dumped every day since people neither do nor follow proper methods for disposal of such wastes. Land pollution indirectly affects the respiratory system of human beings. Breathing in polluted dust or particles can result in a number of health problems related to the respiratory system. Skin problems are often diagnosed due to land pollution. It is said that the improper disposal of household wastes leads to allergic reactions on the skin. Land pollution has been found as one of the leading causes for birth defects. Pregnant women living in unhealthy and dirty environment can incur breathing problems and a number of diseases, which may affect the health of the baby as well. Land pollution has effect on wildlife. Flora which provide food and shelter to wildlife are destroyed⁵¹. Finally, land pollution often disrupts the balance of nature, causing human fatalities⁵².

⁴⁹. <http://www.megaessays.com.viewpaper18965.html>, accessed on 4th January, 2010.

⁵⁰. http://www.lifestyle.lloveindia.com/lounge/caussendeffects_of_land_pollution-4470.html. accessed on 6th February, 2010.

⁵¹. *Ibid.*

⁵². *Ibid.*

4.2. Effects of Air Pollution

In the vast topic of environmental protection law, the central issue is air pollution control⁵³. It is the most difficult and sensitive. According to Akanbi, air is invisible, intangible and fleeting; it may be soiled, abused, degraded and contaminated with dangerous pollutants until it reaches hazardous, even deadly level before it is noticed⁵⁴. Air pollution damages the environment in its totality. Apart from soiling building, fabrics and scenic beauty, air pollution can result in water and soil pollution after rainfall or when it causes acid rain. It kills birds in the air and animals on the ground and creatures that need clean air for survival. It ruins agriculture as it damages crops and foliage leaving forest laid bare. Since pollution makes air corrosive, it destroys metal and steel products and work of art. It impairs visibility thus making traffic on land and in the air risky.

Almost in the same vein, Oludayo is of the opinion that air pollution varies according to the intensity and duration of exposure and the health status of the population exposed. Carbon monoxide poses a particular problem; it has a high affinity for haemoglobin and is able to displace oxygen. Oxygen transport from the lung to the tissue is severally impaired by CO₂, which can result in cardiovascular and neuro behavioural effect. Carbon dioxide acts as an asphyxiant by reducing the amount of oxygen in the lungs by dilution⁵⁵.

Most of the traditional air pollutants directly affect the respiratory and cardiovascular systems⁵⁶. Increased mortality, morbidity and impaired pulmonary function have been associated with elevated levels of SO₂ and SPM Nitrogen dioxide and O³ also affect the respiratory system, acute exposure can cause inflammatory and permeability reactivity. The growing pollution of the environment has led to a series of environmental and health related problems in many of the urban cities in our country, such health hazards are evident in the

⁵³. Akanbi, E.O. "Air Pollution Control Law" in Omotola, J.A. *op. cit* p. 191.

⁵⁴. *Ibid.*

⁵⁵. Oludayo A. G *op. cit*, p 384.

⁵⁶. *Ibid.*

occurrence of respiratory diseases such as cough, bronchitis and lung cancer⁵⁷. What is more, there is evidence that air pollution alters climate and may produce global changes in temperature⁵⁸.

4.3. Effects of Noise Pollution

Noise pollution generally is an unwanted noise; hence, long exposure to noise of a high intensity may cause hearing impairment, decreased efficacy, emotional disturbances, psychological disorder and disturbance of sleep⁵⁹. For instance, very high levels of noise can wake people from their sleep with a jerk and keep them awake or disturb their sleep pattern. This could make them irritable and tired the next day⁶⁰.

Noise can also affect the human health in that it disturbs our health and behaviour in a number of ways including irritability, indigestion, heartburn, high blood pressure, ulcers, and heart diseases. Just one noise explosion from a passing truck drastically alters endocrinal neurological and cardiovascular functions in many individuals. If this is prolonged or frequent, the sociological disturbances become chronic and contribute to mental illness⁶¹.

Annoyance is another effect of noise, in that even low levels of noise are irritating and can be frustrating sometimes and high volumes can be annoying. Natural sounds are less irritating when those we find uncontrollable but intermittent sounds such as a tap dripping water can be more irritating than the sound of falling rain.

Increased noise levels gives rise to a lack of concentration and accuracy of work, and reduce one's productivity and performance at work. Difficult tasks can be impaired and restrictions or warnings difficult to be heard and interpreted, causing accidents⁶².

⁵⁷. *Ibid.*

⁵⁸. Akanbi, E.O. *op cit*, p. 191..

⁵⁹. Atsegbua *et al*, *op cit*, p, 74

⁶⁰. *Ibid.*

⁶¹. Okediran, *op cit*, p. 55.

⁶². *Ibid.*

4.4. Effects of Oil Pollution

Oil has been identified as the single largest pollutant of water in Nigeria. Describing the nature of oil pollution, Ikhide Ehighehua has noted that when used motor oil is poured on the ground, it can seep down to the ground water and contaminate drinking water supplies. A single quart of oil can pollute 250,000 gallons of drinking water. Also, pouring oil into the sewer or on the street where it will eventually wash into the sewer is like pouring it directly into a stream or a river, and just one quart of used motor oil can produce a poisonous slick an acre in diameter.

The effect of oil pollution (spillage) is most severe and noticeable in three immediate environments – the atmosphere, terrestrial and the marine environment. The effect of pollution on land is most austere especially on land and crops. On crops, gas flaring causes reduced light intensity and the consequences that follow – for example, oxides of nitrogen and sulphur and the inevitable severe effect on crops, crop yields and wild life in the affected environment.⁶³ Pollution load stimulates the growth of bacteria and accelerates oxidation rate with a resultant oxygen depletion which inhibits biological life⁶⁴. Nitrogen and Phosphorous compound in discharge encourage algal growth and colour and turbidity in waste waters create aesthetic problems⁶⁵. Another effect of oil pollution on the environment is gas flaring by the Oil companies. This according to Oludayo, constitutes almost ninety percent of gas discovered by oil companies in Nigeria in the process of crude oil exploration. In the case of plant upsets, thermal radiation effects can be serious and damaging if flare height and distance from personnel and building is not adequate. According to Oludayo, another local effect is caused when the thermal energy released from process units increases the average temperature in the vicinity of the refinery and contributes to localised climate change.

⁶³ Imevbore, A. M. A. *The Petroleum Industry and the Niger Delta* Vol. 2, Lagos NNPC Publication), p. 96.

⁶⁴ Ndibe, O. V.. *op cit*, p. 62.

⁶⁵ *Ibid*.

The threat which oil pollution poses to the environment was aptly captured by late Professor Ambrose Alli⁶⁶ when he said as follows:

"As a result of oil losses, vast tracts of agricultural land have been laid waste, thus becoming unproductive, surface water and river courses are invariably contaminated and polluted, rendering the water undrinkable and the aquatic life is destroyed. The result is great hardship for the inhabitants who become improvised and deprived. These unfortunate citizens are therefore compelled to migrate to other towns and villages in search of decent life".

Similarly, a good example of the effect of oil spillage on water and oceans was made clear by leading environmentalist and former Vice-President of the United States of America, Mr. Al Gore when he opined thus:

"One of the most viable contaminants in oceans and some inland river system released by Saddam Hussein into the Persian Gulf, or the one negligently released by the Exxon Valdez Prince William Sound, capture our attention, but the far more numerous smaller spills that take place unnoticed every year probably do more cumulative damage to the oceans. It is in the third world where the effects of water pollution are most keenly and tragically felt in the form of high death rates from cholera, typhoid fever, dysentery and diarrhoea from both viral and bacterial sources".⁶⁷

⁶⁶. Late Professor Ambrose Alli was the former Civilian Governor of Bendel State. He made the assertion in his *"Ceremonial Opening Address" in the Petroleum Industry and the Nigerian Environment Proceedings of International Seminars* held in Port Harcourt, Nigeria. 1981, p. 2.

⁶⁷. Atsegbua Lawrence *et al op cit*, p. 73

Thus, oil spills can result in health hazards to human beings and can also cause fire outbreaks, constitution extensive damage to life and property⁶⁸. Notably, Yalaju has observed that the damage caused to the marine environment by oil pollution is incalculable.⁶⁹ Within the marine environment, oil pollution destroys both the mangrove and the lives dependent on it. From the inception of oil exploration and exploitation most marine lives which constitute the inhabitants of the swamps are destroyed to make way for oil exploitation.⁷⁰ Furthermore, oil pollution exposes the polluted environment to the free action of the air as in the oxygenation of the blood in respiration. On the surface of water, oil may limit oxygen exchange, entangle and kill surface organism and coat the grill of fishes.⁷¹

4.5. Effects of Industrial Pollution

Industrial pollution threatens both human, animal and plant life⁷². Worse affected by the effect of industrial pollution are the urban cities. For example, big cities with steel mills, power plants, heating plants, or rail road stations feel the direct effects of industrial pollution. The smog, smell and contamination of food or water have some direct effects. Remotes areas are also affected directly and indirectly by industrial pollution. Even though the people in these communities may not live near factories or plants etc, they still are affected. The air pollution caused by the industries can cover many miles. In early times, coal powered most industries; the burning of coal fills the air with smoke and

⁶⁸. *Ibid.* p.74

⁶⁹. Jehwo Yalaju, "Laws Regulating Oil Pollution in Nigeria (A Re-Appraisal)". Available at http://dspace.unijos.edu.ng/bitstream/10485/710/1/Laws_Regulating_Oil_Pollution_in_Nigeria.001.pdf, accessed on 4thFebruary, 2010.

⁷⁰. *Ibid.*

⁷¹. Odu, C., "The Oil Industry and the Environment" *The Nigeria Accountant*, Vol. XIV, No. 1, 1 Jan/March, 1989, p. 25

⁷². Agomo, C. K, *op cit*, p. 65.

soot⁷³. Going round some part of South West part of the country most especially Ile-Ife and Ikirun in Osun State, one can easily see that Iron and Steel Factories are sited in location very close to the cities. Similarly, there are large numbers of quarries along Lagos/Ibadan Expressway and particularly around Idi-Ayunre Village near Ibadan and also at Wasinmi near Gbongan township in Osun State. Smokes from the furnaces of these Iron and Steel Companies during iron smelting and dust particulates from the aforementioned quarries are terrible sources of air pollution with serious adverse effect on the dwellers around these places.

4.6. Effects of Water Pollution

Water is very essential to all living organisms, as a matter of fact, no one can survive without water. The effects of water pollution vary and depend on what chemicals are dumped and in what locations⁷⁴. Boston harbour is a good example of how badly pollution can damage bodies of water. The water is filled with toxic waste and sewage and routinely receives more waste when rainfall pushes it into the harbour. Many bodies of water near urban areas are highly polluted. This is the result of garbage dumped by individuals and dangerous chemicals legally or illegally dumped by industries⁷⁵.

The main effect of water pollution is that it kills life that inhabits water-based ecosystems. Dead fish, birds, dolphins, and many other animals often wind up on beaches, killed by pollutants in their habitat. An example is the Minimata Japan, 1953 – 1960, people eating fish polluted by mercury. This resulted in 120 dead and numerous injured⁷⁶. One cannot forget in hurry the incident of water flood in Ibadan in 1980 when thousands of lives and property worth billions of naira were washed away during river Ogunpa flood of that year. While explaining

⁷³. <http://www.megaessays.com/view/paper/489.html>, accessed on 4th January, 2010.

⁷⁴. "The Environment, A Global Change" - [http://library.thinkquest.org/26026/environmental/problems/water/water pollution effect. Html](http://library.thinkquest.org/26026/environmental/problems/water/water%20pollution%20effect.html), accessed on 4th January 2010.

⁷⁵. *Ibid*,

⁷⁶. *Ibid*.

the effect of water pollution on the environment, Lawrence Atsegbua argued that pollution disrupts the natural food chain as well. Pollutants such as lead cadmium are eaten by tiny animal. Later, these animals are consumed by fish and shellfish, and the food chain continues to be disrupted at a higher levels. Eventually, humans are affected by this process as well; people can get diseases such as hepatitis by eating seafood that has been poisoned. Ecosystems can be severely changed or destroyed by water pollution. Many areas are now being affected by careless human pollution, and this pollution is coming back to hurt humans.

The World Bank Report "Towards the Development of an Environmental Action Plan for Nigeria" identified water pollution as the second highest potential for future negative impact on the Gross Domestic Product (GDP) (estimated at US \$1 billion annually) and puts 40 million people at risk⁷⁷. Many Nigerian communities lack water treatment or even water supply facilities and rely on local surface and shallow ground water supplied even when they are contaminated.⁷⁸

5.0. Legal Mechanisms for the Control of Environmental Pollution

Prior to the dumping of radioactive substances at Koko in Delta region of the then Bendel state in 1988, Nigerian government did not see the need to pay much attention to the environmental issue, particularly, the incident of environmental pollutions amongst other. The Koko incident served as an eye opener, and ever since, much steps have been taken by Nigerian government to put in the front burner the issue of environmental protection. Consequently, in order to prevent disaster the federal governments has entered a number of treaties, and put in place pieces of national legislation and state legislation to combat environmental pollution. Discussion in this paper will be restricted to

⁷⁷. Atsegbua, *et al*, *op cit*, p. 72,

⁷⁸. *Ibid*,

legislations at the federal level of governance. With regard to international treaties and conventions, some of these had been adopted or ratified by Nigeria government pursuant to section 12 of the Constitution of the Federal Republic of Nigeria, 1999⁷⁹. These legislation are considered below:

5.1. Constitution of the Federal Republic of Nigeria, 1999

The Constitution provides thus: 'The state shall protect and improve the environment and safeguard the water, air and lands, forest and wildlife of Nigeria'⁸⁰.

This provision is a marked departure from what obtained under the previous Constitutions in Nigeria. However, in spite of the laudable inclusion of this provision in the 1999 Constitution, it is sad to note that the provision cannot be enforced in the court of law having been inserted into Chapter II of the Constitution which in principle is non-justiciable. Despite the non-justifiability of the above provision, the good news is that the inclusion of it in the Constitution is normative and in addition has the following advantages: Firstly, the environmental objective contained in section 20 of the Constitution carries with it the correlative duty to refrain from impairing the environment. The environmental objective thus, implies among other things the judicious management and conservation of the country's forest, without such forests, the ecological or environmental balance would be irreversibly disrupted.

Secondly, the provision in section 20 stresses the "necessity" of improving and safeguarding the three environmental media for the purpose of protecting and enhancing the quality of the environment and lastly, the government owes it as moral duty to observe the provision when environmental issues are being considered.

⁷⁹. The section relates to domestication of foreign treaty, convention, protocol or bi-lateral agreement to which Nigeria is signatory before having force of Law in Nigeria.

⁸⁰. Section 20 of the Constitution of the Federal Republic of Nigeria 1999.

5.2. National Enactments

5.2.1. *The National Environmental Standards Regulation Enforcement Agency (Establishment) Act*⁸¹

The National Environmental Standards Regulation Enforcement Agency (Establishment) Act is now the major national Act on environmental issues. This Act repealed the first indigenous Act on the environment: Federal Environmental Protection Agency Act (FEPA). The new Act established The National Environmental Standards Regulation Enforcement Agency (NESREA) and gave it functions. Unlike the FEPA Act, the new Agency is also an enforcement Agency for environmental standards, regulations, rule, laws, policies and guidelines. The functions of the Agency as laid down in section 7 of the Act include amongst others the responsibility to enforce compliance with the provisions of international agreements, protocols, conventions and treaties on the environmental, including climate change, biodiversity, conservation, desertification, forestry, oil and gas, chemicals, hazardous wastes, ozone depletion, marine and wildlife, pollution, sanitation and such other environmental agreements as may from time to time come into force⁸².

NESREA is vested with the power to enforce compliance with policies, standards, legislation and guidelines on water quality, environmental health and sanitation, including pollution abatement⁸³.

In addition to the above function, the Agency also has the power to among others submit for the approval of the Minister, proposals for the evolution and review of existing guidelines, regulations and standards on environment other than in the oil and gas sector including:

- i. environmental protection,

⁸¹. The Act was assented to by Late President Umaru Musa Yar' dua on 30th July, 2007.

⁸². Section 7 (c) of National Environmental Standards Regulation Enforcement Agency (Establishment) Act, 2007.

⁸³. Section 7 (d) of National Environmental Standards Regulation Enforcement Agency (Establishment) Act, 2007

- ii. air quality,
- iii. ozone depleting substances,
- iv. noise control,
- v. effluent limitation,
- vi. water quality,
- vii. waste management and environmental sanitation,
- viii. erosion and flood control
- ix. coastal zone management,
- x. dams and reservoirs,
- xi. watershed management,
- xii. deforestation and bush burning,
- xiii. other forms of pollution and sanitation, and
- xiv. control of hazardous substances and removal control methods⁸⁴.

The shortcoming of the new Act is that it is not primarily responsible to checkmate activities in the Oil sector of the country. This is a big lacunae in the new Act, it is suggested that there is the need to urgently amend the Act to embrace activities in the oil sector of the Nigerian economy.

5.2.2. *Water Resources Act*

In 1993 Nigerian government promulgated the Water Resources Act, No. 101⁸⁵. In passing this Act, the government intends to vest in Federal Authority, the right to use and control certain categories of water sources in all cases where they affect more than one state of the federation. The objectives of the Act are four namely:

- a. The promotion of the optimum planning development and use of Nigeria's water resources.

⁸⁴. Section 8 (k) of National Environmental Standards Regulation Enforcement Agency (Establishment) Act, 2007

⁸⁵. The Act is now Cap. W2, Laws of the Federation of Nigeria, 2004,

- b. The coordination of such activities that are likely to influence law to enhance the quality, distribution, use and management of water.
- a. The application of appropriate standards and technologies for the investigation, use, control, protection, management and administration of water resources.
- c. 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 disposal of sewage, effluent and waterborne waste, and the control and prevention, flooding, erosion and damage to the water shed areas, and also the protection of inland fisheries, flora and fauna⁸⁶.

5.2.3. Land Use Act⁸⁷

In order to minimize and control the deleterious effects of land pollution, the Nigerian Government in 1978 promulgated the Land Use Act. The objective of this Act is to ensure that the ecological and aesthetic values of the nation are preserved and enhanced.

5.2.4. Oil in Navigable Water Act⁸⁸

A major Federal Law that protects water pollution is the Oil in Navigable Water Act. The long title to the Act reads:

“An Act to implement the terms of the international Convention for the prevention of pollution at the sea by oil 1954 to 1962 and to make provision for such prevention in the Navigable Waters of Nigeria”.

⁸⁶. See section 5 of the Act.

⁸⁷. The Act was promulgated in 1978 but is included in Laws of the Federation of Nigeria, 2004 as Cap. L5, Laws of the Federation of Nigeria, 2004

⁸⁸. The Act was promulgated in 1968 but is included in Laws of the Federation of Nigeria, 2004 as Cap. O6, Laws of the Federation of Nigeria, 2004

Under the Act, it is an offence to engage in any of the following activities:

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

The Act also provides penalties for offences under sections 1, 3 or 5, which offences are punishable with fines under section 6 of the Act. However, the prosecution of any of the offences listed in the Act can only be commenced by the Federal Attorney General⁸⁹.

5.2.5. *River Basin Authorities Act, 1976 (as amended)*

The management of both surface and underground water resources is vested in River Basin Authorities. The Authorities are empowered to undertake comprehensive development of both surface and underground water resources for multiple uses including but not limited to irrigation, food production and control of erosion and watershed management. They also have the power to control the pollution of river basins under their management and to impose penalty for breach. By this procedure, water resources are sustainably managed to meet the diverse needs of the rural dwellers and improved on their living standards.

5.2.6. *Criminal Code Act*⁹⁰

Again, the Criminal Code provides for environmental pollution. Under the Code, it is an offence to pollute the atmosphere in such a way as to make it noxious to the health of person in general dwelling or carrying on business in the neighbourhood. Accordingly, section 247 of the

⁸⁹. See section 12 of the Act.

⁹⁰. The Act is included in Laws of Federation of Nigeria, 2004 as Cap. C 38, Laws of the Federation of Nigeria, 2004

Criminal Code provides that any person found guilty shall on conviction be liable to six months imprisonment.

Furthermore, under the Code, any person who fouls the water of any spring, stream, well, tank or reservoir, so as to make it less fit for the purpose for which it is ordinarily used is guilty of misdemeanour and liable to an imprisonment for six months⁹¹

5.2.7. Harmful Waste (Special Criminal Provision etc) Act⁹²

Under Section 1 of the Harmful Waste (Special Criminal Provision etc) Act it is an offence to carry, deposit, dump, transport, import, sell or offer for sale, purchase or deal in any harmful waste inimical to the atmosphere. Any person found guilty shall on conviction be liable to the criminal penalties.

5.2.8. The Factories Act⁹³

Section 7 of the Act makes it compulsory for the factory to be clean and also provides at section 20(1) and (2) for proper disposal of machinery and other wastes in order to avoid pollution.

The Factories Act also provides for the liability of owner in cases of discharges, as they would be held responsible for the damages caused by such discharge.

5.2.9. Associated Gas (Re-injection (continued Flaring of Gas) Act⁹⁴

The Act compels every company producing oil and gas in Nigeria to submit preliminary programmes for gas re-injection and a detailed plan

⁹¹. See section 245 of the Code

⁹². The Act was promulgated in 1988 but is included in Laws of Federation of Nigeria, 2004 as Cap. HI, Laws of the Federation of Nigeria, 2004

⁹³. The Act is included in Laws of Federation of Nigeria, 2004 as Cap. C38, Laws of the Federation of Nigeria, 2004.

⁹⁴. The Act is included in Laws of Federation of Nigeria, 2004 as Cap. A25, Laws of the Federation of Nigeria, 2004

for the implementation of gas re-injection. This Act became necessary to curb the incidences of gas flaring.

In spite of this Act, it is sad to observe that twenty-two years after its promulgation, ninety percent of the gas discovered in Nigeria is still flared.

5.3. *International Laws and Conventions on Environmental Pollution*

In order to ultimately prevent the disasters that may result from environmental pollution, The Nigerian government has entered into a number of international Laws, Treaties and Convention which deal with the problems of environmental pollution. Chiefly among these international conventions are the following:

5.3.1. *International Convention for the Prevention of the Pollution of the Sea by Oil*

This convention came into being in London in May, 1954; it was subsequently amended on 11th April, 1962 and 21st October, 1969. The original Convention was adopted on 12th May, 1954 and it came into force on 26th July, 1958. Nigeria accepted the Convention on 22nd April, 1968, but refused to accept the amendment of the Convention of 1962 and 1969 respectively.

The Convention which was a follow up to the deliberation of the Inter-governmental Maritime Consultative Organisation (IMCO) was aimed at tackling the problem of oil pollution at sea within fifty miles from land. The Convention prohibits tankers from discharging oil or oily mixture anywhere within 50 miles of land or 150 miles from prohibited zone during tanker cleaning operation. The 1962 Convention prohibits vessels weighing 20,000 gross tons or over from discharging oil or oily waste in prohibited zones.⁹⁵

⁹⁵. See Article 111(c) of the Convention.

5.3.2. *International Convention on Civil Liability for Oil Pollution Damage*⁹⁶

The aim of this Convention is to ensure that adequate compensation is paid to persons who suffer damage caused by pollution arising from the escape or discharge of oil from ships and to create standards for international rules and proceedings for the determination of the question of liability and adequate compensation. Under the Convention, the liability of the ship-owner for pollution damage is based on strict liability; thus, rendering unnecessary the need for the claimant to prove that the ship-owner was negligent. Furthermore, the ship-owner must have a compulsory liability insurance in return for which the ship-owner's liability is limited to an amount limited to the ship's tonnage but the right to limit the liability will be lost if the owners was at fault.⁹⁷

Under Article 3 of the Convention, certain activities were excluded from the liability, thus, a ship owner will not be liable for leakage of oil occasioned by an act of war, natural disaster and malicious act of the third party.

⁹⁶. The Convention was adopted in Brussels, Belgium on 29th November, 1969, it came into force on 10th June, 1975. Nigerian accepted the convention on the 5th August, 1981.

⁹⁷. Michael L. Ugbokwe Esq, "Assessment of Existing National Legislation and Regulations Related to Pollution Prevention". An update paper presented at the National Workshop for the Ratification, Implementation of MARPOL 73/78 organised by International Maritime Organisation in conjunction with Federal Ministry of Transport in Lagos between 17th to 29th August, 2001, p.12. Nigeria is a signatory to the CLC 1967 but it is not a signatory to its Protocol of 1972 and 1992 respectively.

5.3.3. *International Convention on the Establishment of an International Fund for Oil Pollution Damage*⁹⁸

The objective of this Convention is to supplement the Convention on Civil Liability for Oil Pollution Damage and to ensure that adequate compensation is paid to person who suffer damage arising from pollution occasioned from the escape or the discharge of oil from ship and to make sure that oil cargo interest bear part of the economic consequence of such pollution.

In order to ensure that the objective of the Convention is met, the Convention establishes a Compensation Fund.⁹⁹

The Convention also excludes liability for pollution caused by war, hostilities or discharge from a war ship.¹⁰⁰

5.3.4. *Convention on the Prevention of Marine Pollution by Dumping Waste and other Matters*¹⁰¹

The objective of the convention is to control pollution of the sea by dumping and to encourage regional agreements supplementary to the Convention.

5.3.5. *Vienna Convention on the Protection of the Ozone Layer*¹⁰²

The aim of the Convention is to protect the ozone layer by taking precautionary measures to control global emission of substances that

⁹⁸. The Convention was adopted in Brussels, Belgium on 18th December, 1971 Nigerian accepted the Convention on the 1st November, 1982. The convention was amended in 1992 Protocol. Nigeria is a signatory to the 1971 Convention, but yet to accede to the amendment made in 1992. See M. I. Igbokwe Esq. "Assessment of Existing National Legislation and Regulations Related to Pollution Prevention" *National Workshop on Marpol 73/78*

Ratification, Implementation and Enforcement, Organised by International Maritime Organisation in Conjunction with Federal Ministry of Transport 27-29 August, (2001) at LeMeridienEko Hotel, Victoria Island, Lagos, p. 12.

⁹⁹. See Article 2 of the Convention.

¹⁰⁰. See Article 4 of the Convention

¹⁰¹. The Convention was adopted in London on 27th December, 1975 Nigeria accepted the Convention on the 18th April, 1976.

¹⁰². The Convention was adopted in Vienna, Austria on 22nd March, 1985, it came into force on 22nd September, 1988.

deplete the ozone layer. Nigeria is signatory to this convention, which came into force on 29 January, 1989.

5.3.6. *Convention for the Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Regions*¹⁰³

The objective of the convention is to protect the marine environment and coastal zone and related internal waters falling within the jurisdiction of the state of the West and Central African Regions of which Nigeria is a party.

5.3.7. *Convention on Long Range Trans-boundary Air Pollution*¹⁰⁴

The Convention is aimed at protecting man and his environment against air pollution and in endeavour to limit and, as far as possible, gradually reduce and prevent air pollution, including long-range trans-boundary air pollution.¹⁰⁵ Furthermore, under the Convention, contracting states are required *inter alia* to initiate policies and strategies for exchange of information, consultation, research and monitoring as a means of combating the discharge of air pollutants. The Convention also seeks for cooperation among members states in the area of research and development of existing and proposed technology for redressing emissions of sulphur compounds and other major air pollutants, including technical and economic feasibility and their environmental consequences.

¹⁰³ Nigeria signed to the Convention on 23rd May, 1981 but was not effective until 5th August, 1984.

¹⁰⁴ The Convention was adopted in Geneva on 13th November, 1979 and came into force on 16th March, 1987.

¹⁰⁵ See Article 11 of the Convention.

5.3.8. Convention on the High Sea¹⁰⁶

The objective of the Convention sought to codify the rules of international law relating to the high sea. The signatory states to the Convention were enjoined to take steps to prevent pollution of the sea by dumping of radioactive waste and also to collaborate with international bodies and agencies in taking such measures to prevent pollution of the sea or airspace above the sea resulting from radio-active materials or other harmful agents¹⁰⁷.

The objective of the convention is to protect States against the consequences of maritime casualties which result in oil pollution of the sea and the coast. States parties are to take such measures on the high seas as may be necessary to prevent, reduce or eliminate grave and imminent danger to their coastline or related interest from pollution or threat of pollution of the sea by oil due to a maritime casualty or acts related to it.¹⁰⁸

6.0. Recommendations and conclusion

The improper disposal of domestic and industrial wastes account for environmental pollution. Thus, in order to assist the public to dispose wastes properly without polluting the environment, government should create public awareness programmes to educate the public on safe disposal of waste. It is also suggested that in addition to various statutory provisions on environmental pollution, government should put in place national standards for treatment of domestic and industrial wastes by adopting the methods of waste treatment, waste isolation, waste recycling, and waste segregation, and waste storage, disposal of toxic waste and construction of sanitary dump site in all the states of the federation.

¹⁰⁶. The Convention was adopted in Geneva on 29th April, 1958; it came into force on 30th September, 1962.

Nigerian Government has accepted the Convention in principle.

¹⁰⁷. See Article 18 of the Convention

¹⁰⁸. See Igbokwe, *op.cit.*, p. 9.

It is also germane to promote the aesthetic quality of our environment through proper development planning. To this end, there is the need to expand urban areas to accommodate modern sewage and drainage system and adequate maintenance of drains.

The problem of water pollution control through law should be invigorated and new policies direction should be introduced to tackle the issue of environmental pollution.

As noted earlier, the federal government had promulgated a new National Environmental Act to replace the former FEPA, however, it is sad to note that in spite of the enormous environmental pollutions cause by the oil and gas sector during exploration, transportation and gas flaring, the activities of this sector are excluded from the functions of NESREA. This is a big *lacunae* in the Act, it is therefore suggested that there is the need to urgently review the Act to subsume the sector within its sphere of authority.

It is imperative to have in place adequate facilities and materials for the protection. As of workers that are exposed to high levels of environmental hazards due to their working environment, For instance, workers that are exposed to intensive noise or dust particles in their working places should be provided with protective gadgets respectively for their noses and ears.

It is also observed that the penalties for environmental pollutions in the various laws having environmental related provisions are archaic and needed urgent review and amendment to impose stiffer penalties for environmental pollution to discourage polluters.

Finally, we all live within the environment, hence, everyone has a role to play to sustain the aesthetic quality of the environment and prevent it from pollution. To this end, collective efforts should be initiated both at the level of government and the governed to stop environmental pollution.

This is to say, political spread practices which have resulted from long term observance.

For more details on the Constitutional practice, drawn from Constitutional Conventions see Malins, E. (2001), *The Nigerian Constitutional Law*, Lagos, Nigeria, Polbooks, 77.